UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Analytical results for 130 rock, 135 stream-sediment and soil, and 110 panned-concentrate samples from the Rattlesnake Wilderness study area, Missoula County, Montana

by

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This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey standards.

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INTRODUCTION

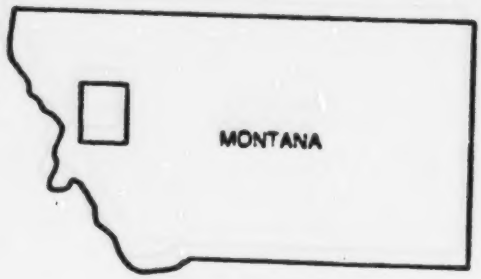
The geochemical sampling program in the Rattlesnake Wilderness study area (fig. 1) consisted of collecting and analyzing 130 rock, 135 stream-sediment and soil, and 110 panned-concentrate samples. Traverses to collect these samples were made along all the ridges and stream drainages of the area.

SAMPLE COLLECTION TECHNIQUES

The rock samples were taken mostly from outcrop, but mineralized float rock samples were taken when found, to evaluate any potential mineral deposits. The stream-sediment samples consisted of the minus-177 micrometer (80-mesh) fraction of drainage sediments, as this fraction is most apt to have metal adsorption on fine clay-size particles. The soils were air-dried and sieved to pass through a 177-micrometer (80-mesh) screen, to concentrate the metal-rich, fine, flay-fraction particles. The panned-concentrate samples were usually panned on-site to enhance the detection limit by a factor of 500 times, but in some instances, when no water was available, the sample was bagged and panned later. Sample localities are shown on plate 1. The samples in this study were collected as an extension of, and as a part of, the Butte 1° x 2° CUSMAP program by J. C. Antweiler, Zairah Antweiler, Brian Stephanek, James Ellerby, Gregory Lee, David Sawyer, Wesley L. Campbell, Phyllis Campbell, and Gregory Campbell.

STUDIES RELATED TO WILDERNESS

The Wilderness Act (Public Law 88-577, September 3, 1964) and related Acts require the U.S. Geological Survey and the U.S. Bureau of Mines to survey certain areas on Federal lands to assess their mineral resource potential. Results must be made available to the public and be submitted to the Administration and the Congress. This report presents the analytical results of a geochemical study of a geological and mineral survey of the Rattlesnake Wilderness study area, Missoula County, Montana.



MAP LOCATION

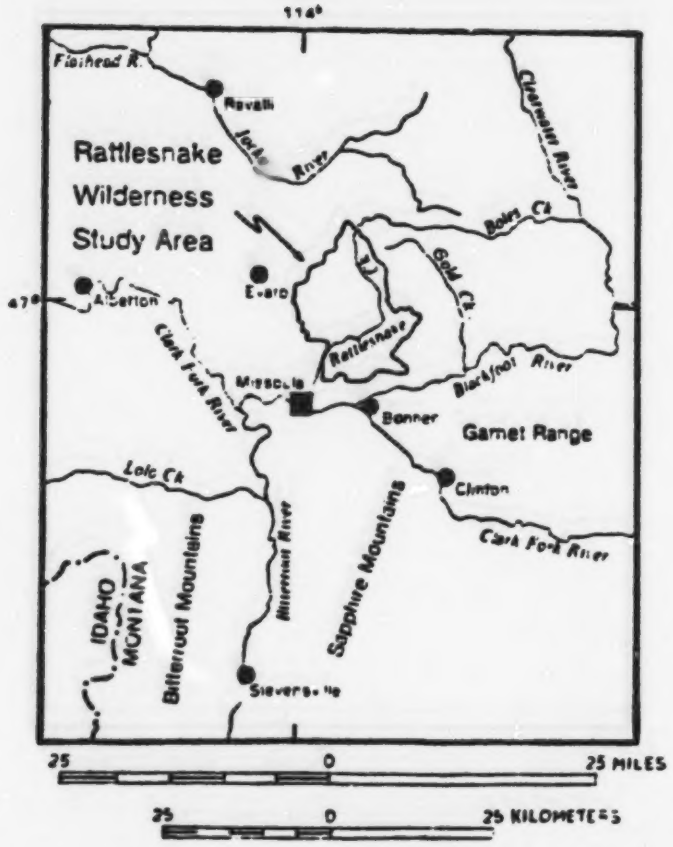


Figure 1.--Index map of the Rattlesnake Wilderness study area, Missoula County, Montana

ANALYTICAL TECHNIQUES

All samples were analyzed for 31 elements by a six-step semiquantitative emission spectrographic method (Grimes and Marranzino, 1968). All panned concentrates and other selected samples were analyzed for gold by an atomic absorption procedure (Thompson and others, 1968). All of the rock and stream-sediment samples were also analyzed for Ag, Bi, Cd, Cu, Pb, Sb, and Zn by a partial digestion procedure (Viets and others, 1979). Sample analyses and locations are presented in this report.

RESULTS

The analytical data are shown in the accompanying tables. Rock samples, coded with suffix R on the sample locality plate, are in table 1. Stream-sediment and soil samples, coded with suffix S, are in table 2. Panned concentrates are in table 3.

EXPLANATION OF TABLES

Values shown are in parts per million except Fe, Mg, Ca, and Ti, which are in percent. Symbols used are >, greater than the sensitivity limit; N, not detected at lower limit of detection; <, an undetermined amount present below the lower limit of detection. Analyses for elements prefixed by S were made by the 6-step semiquantitative spectrographic method. These elements are reported to the nearest number in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, and 0.1, which represent approximate midpoints of group data on a geometric scale. Numbers in parentheses above the element symbols are the lower limits of detection by the analytical method used.

TABLE 1.—ROCK SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA

Sample	LATITUDE	LONGITUDE	(.05) S-FE%	(.02) S-MG%	(.05) S-CA%	(.002) S-TI%	(10) S-MN	(.5) S-AG	(200) S-AS	(10) S-AU	(10) S-B	(20) S-BA	(1) S-BE	(10) S-BI
BLP0038R	46 55 20	113 47 28	.70	.30	<.05	.150	150	N	N	N	50	150	<1.0	N
BLP0039R	46 55 31	113 47 34	2.00	.70	<.05	.150	100	N	N	N	70	200	1.5	N
BLP0040R	46 56 2	113 48 46	5.00	1.00	.20	.700	150	N	N	N	500	500	1.5	N
BLP0041R	46 56 14	113 48 47	3.00	.30	.20	.700	300	3.0	N	N	200	200	1.5	N
BLP0042R	46 56 38	113 48 57	1.00	.70	<.05	.200	100	N	N	N	100	150	2.0	N
BLP0043R	46 56 51	113 48 23	.50	.15	<.05	.030	50	N	N	N	N	1,000	N	N
BLP0044R	46 57 13	113 47 38	.30	.15	<.05	.050	100	N	N	N	<10	1,500	N	N
BLP0045R	46 57 17	113 47 33	7.00	.70	<.05	.150	500	N	N	N	20	700	1.0	N
BLP0046R	46 57 27	113 47 2	3.00	1.50	.07	.150	300	N	N	N	70	500	1.0	N
BLP0047R	46 57 47	113 46 33	3.00	2.00	.15	.300	500	N	N	N	100	700	2.0	N
BLP0048R	46 58 43	113 45 57	.30	.15	<.05	.030	100	N	N	N	<10	300	<1.0	N
BLP0049R	46 59 8	113 45 20	.50	.20	<.05	.050	70	N	N	N	10	300	<1.0	N
BLP0050R	46 59 33	113 45 13	.50	.20	<.05	.030	100	N	N	N	100	150	<1.0	N
BLP0431R	46 56 44	113 49 14	.70	.30	<.05	.150	70	N	N	N	30	200	1.0	N
BLP0432R	46 56 52	113 49 39	1.00	.50	<.05	.150	70	N	N	N	50	200	1.0	N
BLP0433R	46 56 56	113 49 52	.70	.10	<.05	.150	20	<.5	N	N	30	150	<1.0	N
BLP0434R	46 56 58	113 50 10	1.00	.50	<.05	.200	100	N	N	N	30	300	1.5	N
BLP0436R	46 56 58	113 50 38	.50	.10	<.05	.200	150	N	N	N	50	70	<1.0	N
BLP0437R	46 57 4	113 51 6	.20	.07	<.05	.300	50	N	N	N	30	30	N	N
BLP0438R	46 57 4	113 51 6	.50	.03	<.05	.100	10	N	N	N	15	30	N	N
BLP0439R	46 57 4	113 51 6	.30	.07	<.05	1.000	10	N	N	N	50	20	N	N
BLP0442R	46 55 59	113 51 46	3.00	1.50	.30	.300	300	N	N	N	100	1,000	2.0	N
BLP0443R	46 56 11	113 51 45	.10	.15	.05	.005	70	N	N	N	100	30	N	N
BLP0444R	46 56 19	113 51 34	.10	.20	15.00	.003	200	N	N	N	N	<20	<1.0	N
BLP0445R	46 56 17	113 51 22	<.05	10.00	15.00	.003	100	N	N	N	15	N	N	N
BLP0446R	46 56 17	113 51 22	<.05	10.00	20.00	.003	70	N	N	N	15	N	N	N
BLP0668R	46 59 24	113 49 1	2.00	2.00	.07	.200	300	N	N	N	150	700	2.0	N
BLP1954R	46 55 22	113 49 35	.30	.03	<.05	.150	100	N	N	N	10	100	N	N
BLP1955R	46 55 15	113 48 46	.70	.02	<.05	.200	150	N	N	N	10	30	N	N
BLP1956R	46 54 58	113 46 36	1.00	.50	.05	.070	50	N	N	N	30	500	1.0	N
NEM0230R	46 59 57	113 57 2	5.00	3.00	.15	.300	500	N	N	N	200	500	2.0	N
NEM0233R	46 58 36	113 55 21	3.00	2.00	.07	.200	300	N	N	N	150	300	2.0	N
NEM0236R	46 59 23	113 54 28	7.00	1.50	.10	.700	500	N	N	N	300	1,500	1.0	N
NEM0412R	46 57 7	113 54 41	1.00	.30	.05	.150	[illegible]	N	N	N	50	500	1.5	N
NEM0447R	46 56 20	113 52 49	2.00	1.00	.20	.300	200	N	N	N	100	1,000	2.0	N
NEM0448R	46 56 17	113 54 9	3.00	1.50	.10	.300	700	N	N	N	200	700	1.5	N
NEM0449R	46 56 12	113 54 38	5.00	.70	.10	.300	500	N	N	N	300	1,000	2.0	N
NEM0611R	46 57 26	113 55 18	.30	.10	.10	.020	50	N	N	N	10	50	N	N
NEM0613R	46 55 38	113 57 31	2.00	5.00	20.00	.150	700	N	N	N	100	300	1.5	N
NEM0650R	46 59 53	113 54 21	1.00	.30	<.05	.100	50	N	N	N	50	500	1.0	N
NEM0651R	46 59 48	113 53 58	3.00	1.00	<.05	.100	100	N	N	N	70	70	1.0	N
NEM0652R	46 59 50	113 54 16	1.00	.50	<.05	.150	50	N	N	N	100	150	1.0	N
NEM0654R	47 1 0	113 55 18	3.00	1.50	<.05	.150	150	N	N	N	150	300	1.0	N
NEM0655R	46 58 3	113 56 24	3.00	3.00	.30	.500	300	N	N	N	300	200	1.5	N
NEM0656R	46 58 3	113 56 24	15.00	2.00	15.00	>1.000	2,000	N	N	N	<10	200	N	N

TABLE 1.—ROCK SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(20) S-CD	(5) S-CO	(10) S-CR	(5) S-CU	(20) S-LA	(5) S-MO	(20) S-NB	(5) S-NI	(10) S-PB	(100) S-SB	(5) S-SC	(10) S-SN	(100) S-SR	(10) S-V	(50) S-W	(10) S-Y	(200) S-ZR
BLP00388	N	N	10	<5	30	N	<20	5	<10	N	N	N	N	20	N	N	N
BLP00398	N	<5	10	<5	30	N	<20	7	10	N	5	N	N	20	N	<10	N
BLP00408	N	15	200	20	100	N	<20	70	20	N	20	N	<100	100	N	50	N
BLP00418	N	7	70	20	150	N	<20	20	15	N	10	N	<100	50	N	70	N
BLP00428	N	N	15	<5	50	N	<20	<5	<10	N	5	N	N	30	N	10	N
BLP00438	N	N	<10	<5	20	N	<20	<5	<10	N	N	N	N	10	N	30	N
BLP00448	N	N	10	<5	20	N	<20	<5	N	N	N	N	N	10	N	<10	N
BLP00458	N	20	50	100	30	N	<20	30	15	N	7	N	N	50	N	20	N
BLP00468	N	7	50	<5	30	N	N	10	15	N	5	N	N	50	N	30	N
BLP00478	N	10	70	20	50	N	<20	20	30	N	15	N	<100	70	N	50	N
BLP00488	N	N	<10	<5	20	N	N	<5	10	N	N	N	N	10	N	N	N
BLP00498	N	N	15	<5	20	N	N	<5	15	N	N	N	<100	15	N	30	N
BLP00508	N	N	15	<5	30	N	N	5	10	N	N	N	<100	15	N	100	N
BLP04318	N	5	<10	<5	30	N	<20	<5	<10	N	5	N	N	15	N	10	N
BLP04328	N	5	15	<5	30	N	<20	5	<10	N	<5	N	N	20	N	<10	N
BLP04338	N	<5	15	N	30	N	N	<5	<10	N	N	N	N	10	N	N	N
BLP04348	N	5	15	<5	50	N	N	7	10	N	5	N	N	30	N	10	N
BLP04368	N	5	15	15	30	N	N	5	<10	N	N	N	N	10	N	<10	N
BLE04378	N	<5	20	N	20	N	<20	<5	<10	N	<5	N	N	20	N	10	N
BLP04388	N	N	10	N	30	N	N	<5	<10	N	N	N	N	15	N	<10	N
BLP04398	N	<5	30	<5	30	N	<20	<5	<10	N	<5	N	N	20	N	10	N
BLP04428	N	7	20	<5	30	N	<20	10	10	N	10	N	<100	30	N	30	N
BLP04438	N	N	<10	N	<20	N	N	<5	<10	N	N	N	N	<10	N	N	N
BLP04448	N	N	N	<5	20	N	N	N	30	N	N	N	<100	<10	N	<10	N
BLP04458	N	N	N	N	<20	N	N	N	<10	N	N	N	N	<10	N	N	N
BLP04468	N	N	N	<5	<20	N	N	N	N	N	N	N	N	<10	N	N	N
BLP06688	N	7	30	<5	30	N	<20	10	15	N	5	N	<100	30	N	30	N
BLP19548	N	N	10	<5	20	N	N	5	<10	N	<5	N	N	15	N	N	N
BLP19558	N	N	20	7	20	N	<20	<5	<10	N	N	N	<100	15	N	<10	N
BLP19568	N	N	20	7	20	N	N	5	<10	N	N	N	<100	15	N	<10	N
NEM02308	N	10	70	<5	<20	N	<20	20	15	N	15	N	<100	70	N	30	N
NEM02338	N	7	50	N	20	N	N	15	10	N	10	N	N	50	N	30	N
NEM02368	N	20	200	20	100	N	<20	70	30	N	20	N	N	100	N	50	N
NEM04128	N	<5	15	15	30	N	N	<5	10	N	<5	N	N	20	N	15	N
NEM04478	N	5	15	<5	<20	N	<20	5	10	N	7	N	N	30	N	50	N
NEP04488	N	10	70	<5	30	N	<20	30	10	N	10	N	N	50	N	20	N
NEM04498	N	7	50	7	50	N	<20	20	<10	N	15	N	N	50	N	30	N
NEM06118	N	N	<10	N	20	N	N	7	<10	N	N	N	N	<10	N	10	N
NEM06138	N	N	30	<5	30	N	N	10	<10	N	10	N	150	30	N	30	N
NEM06508	N	5	15	N	20	N	<20	7	10	N	<5	N	<100	30	N	15	N
NEM06518	N	5	15	<5	20	N	<20	15	<10	N	5	N	N	30	N	30	N
NEM06528	N	<5	20	<5	20	N	N	5	10	N	<5	N	<100	20	N	10	N
NEM06548	N	7	10	5	20	N	<20	15	10	N	5	N	N	50	N	30	N
NEP06558	N	10	150	<5	30	N	<20	10	10	N	10	N	<100	70	N	50	N
NEM06568	N	50	<10	100	N	N	N	30	30	N	50	N	700	500	N	70	N

TABLE 1.—ROCK SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(10) S-ZR	(100) S-TH	(1) AA-CU	(1) AA-PB	(1) AA-ZN	(.05) AA-AG	(.05) AA-CO	(1) AA-BI	(1) AA-SB
BLP00388	150	N	1	1	1	<.05	<.05	<1	<1
BLP00398	200	N	1	2	1	<.05	<.05	<1	<1
BLP00408	500	N	8	5	6	<.05	.05	1	<1
BLP00418	>1,000	N	6	3	6	<.05	<.05	<1	<1
BLP00428	300	N	1	1	2	<.05	<.05	<1	<1
BLP00438	200	N	1	1	1	<.05	<.05	<1	<1
BLP00448	150	N	<1	<1	<1	<.05	<.05	<1	<1
BLP00458	300	N	68	7	13	<.05	<.05	1	<1
BLP00468	300	N	1	2	4	<.05	<.05	<1	<1
BLP00478	200	N	10	9	8	<.05	<.05	<1	<1
BLP00488	100	N	<1	1	1	<.05	<.05	<1	<1
BLP00498	70	N	<1	1	1	<.05	<.05	<1	<1
BLP00508	150	N	<1	1	1	<.05	<.05	<1	<1
BLP04318	700	N	3	<1	1	<.05	<.05	<1	<1
BLP04328	200	N	2	1	1	<.05	<.05	<1	<1
BLP04338	150	N	1	<1	<1	<.05	<.05	<1	<1
BLP04348	200	N	1	<1	1	<.05	<.05	<1	<1
BLP04368	150	N	4	<1	1	<.05	<.05	<1	<1
BLP04378	700	N	1	<1	1	<.05	<.05	<1	<1
BLP04388	100	N	1	<1	1	<.05	<.05	<1	<1
BLP04398	700	N	<1	<1	1	<.05	<.05	<1	<1
BLP04428	200	N	<1	1	6	<.05	<.05	<1	<1
BLP04438	<10	N	<1	<1	1	<.05	<.05	<1	<1
BLP04448	N	N	1	20	11	<.05	.22	<1	<1
BLP04458	N	N	<1	3	6	<.05	<.05	<1	<1
BLP04468	N	N	<1	<1	4	<.05	<.05	<1	<1
BLP06688	300	N	<1	2	4	<.05	<.05	<1	<1
BLP19548	300	N	2	1	1	.05	<.05	<1	1
BLP19558	300	N	2	1	1	.07	<.05	<1	<1
BLP19568	300	N	4	1	1	<.05	<.05	<1	<1
NEM02308	200	N	<1	2	6	<.05	.05	1	<1
NEM02338	150	N	<1	2	5	<.05	.07	1	<1
NEM02368	300	N	8	8	9	<.05	.05	1	<1
NEM04128	150	N	10	<1	1	<.05	<.05	<1	<1
NEM04478	300	N	1	2	3	<.05	<.05	<1	<1
NEM04488	300	N	<1	2	4	<.05	.07	<1	<1
NEM04498	200	N	1	2	6	<.05	.05	1	<1
NEM06118	30	N	<1	1	<1	<.05	<.05	<1	<1
NEM06138	70	N	140	2	13	.15	.13	<1	2
NEM06508	300	N	<1	1	3	<.05	<.05	<1	<1
NEM06518	300	N	<1	1	<1	<.05	<.05	<1	<1
NEM06528	300	N	<1	1	1	<.05	<.05	<1	<1
NEM06548	300	N	1	1	3	.05	<.05	<1	<1
NEM06558	>1,000	N	<1	1	6	<.05	<.05	<1	<1
NEM06568	100	N	91	11	12	<.05	.08	1	<1

TABLE 1.—ROCK SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	LATITUDE	LONGITUDE	(.05) S-FE%	(.02) S-MG%	(.05) S-CA%	(.002) S-TI%	(10) S-MN	(.5) S-AG	(200) S-AS	(10) S-AU	(10) S-B	(20) S-BA	(1) S-BE	(10) S-BI
REM06598	46 59 10	113 54 52	5.00	.50	2.00	.300	300	N	N	N	200	200	2.0	N
REM06608	47 0 0	113 54 50	1.50	.20	.50	.200	150	N	N	N	100	100	1.0	N
REM06618	46 59 2	113 54 33	7.00	1.00	.50	1.000	100	N	N	N	300	500	2.0	N
REM06628	46 59 5	113 54 36	7.00	1.50	.05	.300	100	N	N	N	300	700	1.5	N
REM06638	46 58 42	113 54 38	2.00	1.00	>20.00	.070	300	N	N	N	N	150	N	N
REM06648	46 59 23	113 52 57	7.00	1.50	.30	.700	300	N	N	N	150	700	3.0	N
REM06678	46 58 2	113 52 52	1.50	.30	<.05	.100	50	N	N	N	100	200	1.0	N
REM08138	46 59 56	113 55 22	3.00	1.00	<.05	.200	150	N	N	N	50	300	1.0	N
REM08148	46 59 39	113 56 3	3.00	.50	.05	.150	300	N	N	N	20	200	1.0	N
REM08158	46 59 12	113 57 10	.50	.15	<.05	.100	50	N	N	N	30	300	<1.0	N
REM08168	46 59 29	113 56 34	2.00	1.50	.07	.150	300	N	N	N	50	300	1.5	N
REM08178	46 59 39	113 55 34	1.00	.15	<.05	.150	70	N	N	N	20	150	<1.0	N
REM08188	46 59 9	113 55 48	2.00	.70	<.05	.150	100	N	N	N	50	150	1.0	N
REM08198	46 58 56	113 56 3	.50	.15	<.05	.070	30	N	N	N	70	300	<1.0	N
STU00018	47 2 18	113 52 50	1.00	.70	.05	.100	150	N	N	N	100	200	1.5	N
STU00078	47 2 27	113 59 11	3.00	1.50	.20	.300	150	N	N	N	50	700	2.0	N
STU00108	47 0 55	113 59 51	10.00	3.00	7.00	1.000	1,500	N	N	N	<10	150	N	N
STU00168	47 5 58	113 55 7	3.00	2.00	.20	.300	300	2.0	N	N	150	500	3.0	N
STU00178	47 5 44	113 55 18	3.00	3.00	.20	.500	200	N	N	N	150	700	3.0	N
STU00188	47 5 19	113 55 24	5.00	2.00	.30	.500	500	N	N	N	200	500	2.0	N
STU00198	47 5 17	113 55 23	2.00	7.00	10.00	.150	>5,000	15.0	N	N	50	1,500	1.5	15
STU00208	47 5 14	113 55 20	3.00	7.00	15.00	.300	>5,000	15.0	N	N	50	2,000	1.5	10
STU00218	47 5 8	113 55 37	3.00	7.00	15.00	.200	5,000	N	N	N	70	700	1.5	N
STU00358	47 3 34	113 58 35	1.50	2.00	.05	.100	150	N	N	N	200	70	1.0	N
STU00368	47 3 34	113 58 33	3.00	3.00	.15	.300	200	N	N	N	200	300	1.5	N
STU00378	47 3 34	113 58 33	5.00	5.00	.15	.300	200	N	N	N	500	200	2.0	N
STU02808	47 5 45	113 52 53	3.00	1.00	.07	.500	200	N	N	N	500	1,500	2.0	N
STU02818	47 5 45	113 52 53	5.00	1.00	.10	.500	200	N	N	N	300	700	2.0	N
STU02828	47 5 51	113 53 38	3.00	1.00	.10	.500	300	N	N	N	300	700	2.0	N
STU02838	47 5 51	113 53 38	15.00	3.00	7.00	>1.000	1,500	N	N	N	10	700	N	N
STU07848	47 6 20	113 54 25	5.00	1.00	1.00	.300	1,500	N	N	N	300	700	2.0	100
STU04168	47 2 21	113 56 31	3.00	.70	.05	.300	300	N	N	N	30	500	1.5	N
STU06008	47 2 27	113 52 51	.70	.30	<.05	.100	50	N	N	N	150	500	1.0	N
STU06018	47 0 6	113 59 55	3.00	5.00	7.00	.300	500	N	N	N	300	700	1.5	N
STU06028	47 0 6	113 59 55	.70	.20	.30	.070	200	N	N	N	<10	30	<1.0	N
STU06048	47 2 26	113 59 15	3.00	2.00	<.05	.300	100	N	N	N	300	150	1.5	N
STU06368	47 0 24	113 55 10	1.50	1.00	.07	.150	70	N	N	N	70	150	1.0	N
STU06378	47 0 24	113 55 10	2.00	1.00	.07	.200	150	N	N	N	70	150	1.5	N
STU06388	47 0 43	113 55 24	3.00	.20	<.05	.150	30	N	N	N	150	150	1.0	N
STU06398	47 0 53	113 55 38	2.00	.50	<.05	.020	150	N	N	N	10	30	<1.0	N
STU06408	47 1 11	113 55 49	3.00	1.00	.07	.700	300	N	N	N	200	300	2.0	N
STU06418	47 1 30	113 56 0	.30	.07	<.05	<.002	70	N	N	N	10	20	<1.0	N
STU06428	47 1 47	113 56 3	5.00	.70	<.05	.070	700	N	N	N	10	70	<1.0	N
STU06438	47 1 53	113 56 5	7.00	.70	.07	.300	300	N	N	N	100	200	2.0	N
STU06448	47 2 10	113 56 2	7.00	1.00	.10	.700	300	N	N	N	300	300	2.0	N

TABLE 1.—ROCK SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(20) S-CO	(5) S-CO	(10) S-CR	(5) S-CU	(20) S-LA	(5) S-MO	(20) S-ND	(5) S-NI	(10) S-PB	(100) S-SB	(5) S-SC	(10) S-SN	(100) S-SR	(10) S-V	(50) S-W	(10) S-Y	(200) S-ZN
NEM0659R	N	7	150	15	200	N	<20	20	30	N	10	N	200	70	N	150	N
NEM0660R	N	7	30	7	30	N	N	10	<10	N	5	N	<100	50	N	30	N
NEM0661R	N	15	200	70	150	N	<20	70	15	N	20	N	<100	100	N	100	N
NEM0662R	N	15	300	30	70	7	<20	70	15	N	30	N	N	100	N	30	N
NEM0663R	N	<5	30	<5	<20	N	N	5	10	N	N	N	300	15	N	N	N
NEM0664R	N	15	100	20	70	N	<20	30	20	N	15	N	N	100	N	70	N
NEM0667R	N	<5	20	5	20	N	N	5	<10	N	<5	N	<100	20	N	<10	N
NEM0813R	N	7	50	30	20	N	<20	30	10	N	5	N	<100	30	N	30	N
NEM0814R	N	7	50	20	20	N	<20	10	10	N	5	N	<100	30	N	20	N
NEM0815R	N	N	15	<5	20	N	N	5	10	N	<5	N	<100	15	N	N	N
NEM0816R	N	5	50	20	30	N	<20	10	15	N	5	N	<100	30	N	30	N
NEM0817R	N	N	20	<5	20	N	<20	<5	10	N	5	N	<100	20	N	<10	N
NEM0818R	N	N	20	20	20	N	<20	15	10	N	<5	N	N	30	N	20	N
NEM0819R	N	N	20	N	20	N	N	7	15	N	<5	N	<100	15	N	N	N
STU0001R	N	7	15	<5	20	N	<20	7	15	N	<5	N	N	30	N	15	N
STU0007R	N	10	70	15	20	N	<20	30	<10	N	10	N	N	50	N	30	N
STU0010R	N	50	100	200	N	N	N	70	<10	N	30	N	150	300	N	30	N
STU0016R	N	10	70	100	50	N	<20	20	15	N	15	N	N	100	N	30	N
STU0017R	N	10	100	70	70	N	<20	30	10	N	15	N	N	100	N	70	N
STU0018R	N	10	100	15	100	N	<20	30	20	N	15	N	N	100	N	70	N
STU0019R	N	7	70	5,000	30	15	N	10	20	N	5	N	<100	30	N	50	N
STU0020R	N	7	70	5,000	100	10	N	20	15	N	10	N	100	30	N	70	N
STU0021R	N	7	70	5	70	N	<20	15	15	N	15	N	<100	70	N	50	N
STU0035R	N	7	20	<5	20	N	<20	15	15	N	<5	N	N	30	N	<10	N
STU0036R	N	10	70	<5	30	N	<20	30	<10	N	15	N	N	70	N	30	N
STU0037R	N	10	70	<5	70	N	<20	30	15	N	15	N	N	100	N	50	N
STU0280R	N	7	70	<5	50	N	<20	15	15	N	15	N	N	100	N	30	N
STU0281R	N	7	50	<5	50	N	<20	15	15	N	15	N	N	70	N	50	N
STU0282R	N	7	50	<5	50	N	<20	20	15	N	15	N	N	50	N	50	N
STU0283R	N	50	10	300	30	N	N	50	15	N	30	N	300	300	N	50	N
STU0284R	N	7	70	5	50	N	N	30	10	N	10	N	<100	70	N	50	N
STU0416R	N	7	50	5	30	N	<20	20	15	N	10	N	N	30	N	30	N
STU0600R	N	<5	15	N	20	N	N	7	15	N	<5	N	N	30	N	N	N
STU0601R	N	7	50	5	70	N	N	15	10	N	10	N	100	50	N	50	N
STU0602R	N	N	10	N	20	N	N	<5	<10	N	N	N	N	<10	N	N	N
STU0604R	N	5	70	<5	30	<5	<20	10	10	N	10	N	N	70	N	30	N
STU0636R	N	7	15	<5	30	N	<20	20	<10	N	7	N	N	30	N	15	N
STU0637R	N	10	15	5	30	N	<20	20	<10	N	7	N	N	30	N	20	N
STU0638R	N	<5	20	<5	50	N	<20	7	<10	N	7	N	N	50	N	20	N
STU0639R	N	5	<10	20	20	N	N	10	15	N	N	N	<100	15	N	N	N
STU0640R	N	7	100	5	50	N	<20	30	30	N	15	N	N	150	N	30	N
STU0641R	N	<5	10	N	<20	N	<20	7	<10	N	N	N	<100	<10	N	N	N
STU0642R	N	10	20	<5	<20	N	N	30	15	N	5	N	<100	30	N	15	N
STU0643R	N	15	70	5	30	N	<20	30	10	N	10	N	N	100	N	300	N
STU0644R	N	15	150	10	70	N	<20	50	15	N	20	N	N	150	N	50	N

TABLE 1.--ROCK SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(10) S-ZR	(100) S-TH	(1) AA-CU	(1) AA-PB	(1) AA-ZN	(05) AA-AG	(05) AA-CD	(1) AA-BI	(1) AA-SB
NEM0659R	500	N	3	12	5	<.05	.06	<1	<1
NEM0660R	500	N	1	2	4	<.05	<.05	<1	<1
NEM0661R	700	N	19	3	10	<.05	<.05	<1	<1
NEM0662R	70	N	3	2	9	<.05	.05	<1	<1
NEM0663R	50	N	1	1	6	<.05	<.05	<1	4
NEM0664R	500	N	5	3	13	<.05	<.05	<1	<1
NEM0667R	700	N	<1	1	2	<.05	<.05	<1	<1
NEM0813R	500	N	3	1	3	<.05	<.05	<1	<1
NEM0814R	300	N	3	2	4	<.05	<.05	1	<1
NEM0815R	100	N	<1	1	1	<.05	<.05	<1	<1
NEM0816R	500	N	2	4	3	<.05	<.05	<1	<1
NEM0817R	300	N	<1	1	3	<.05	<.05	<1	<1
NEM0818R	300	N	2	1	4	<.05	<.05	<1	<1
NEM0819R	100	N	<1	1	1	<.05	<.05	<1	<1
STU0001R	300	N	<1	2	2	<.05	<.05	<1	<1
STU0007R	200	N	10	1	1	<.05	<.05	<1	<1
STU001CR	100	N	200	2	10	<.05	.06	<1	<1
STU0016R	300	N	140	4	6	.91	.09	1	<1
STU0017R	200	N	66	2	8	.05	.07	1	<1
STU0018R	1,000	N	1	5	14	<.05	.13	<1	<1
STU0019R	300	N	3,300	7	18	5.66	.12	7	<1
STU0020R	700	N	4,200	7	35	9.24	.17	9	<1
STU0021R	200	N	11	5	11	<.05	.10	1	<1
STU0035R	100	N	1	3	2	<.05	<.05	<1	<1
STU0036R	300	N	<1	1	3	<.05	<.05	<1	<1
STU0037R	500	N	<1	4	3	<.05	.06	<1	<1
STU0280R	200	N	1	2	2	<.05	.07	<1	<1
STU0281R	500	N	<1	2	2	<.05	.05	<1	<1
STU0282R	300	N	<1	2	3	<.05	.05	<1	<1
STU0283R	150	N	132	4	27	<.05	.16	<1	<1
STU0284R	500	N	2	2	8	<.05	.12	<1	<1
STUC416R	200	N	4	3	5	<.05	<.05	<1	<1
STU0600R	200	N	<1	<1	1	<.05	<.05	<1	<1
STU0601R	200	N	2	4	36	<.05	.06	1	2
STU0602R	30	N	1	2	7	<.05	.05	<1	<1
STU0604R	500	N	1	1	3	<.05	<.05	<1	<1
STU0636R	300	N	1	1	5	<.05	.05	<1	<1
STU0637R	200	N	1	1	11	<.05	<.05	<1	<1
STU0638R	300	N	1	2	4	<.05	.06	<1	<1
STU0639R	10	N	4	7	6	<.05	<.05	<1	<1
STU0640R	300	N	1	10	10	<.05	<.05	<1	<1
STU0641R	N	N	<1	1	1	<.05	<.05	<1	<1
STU0642R	100	N	<1	5	11	<.05	<.05	<1	<1
STU0643R	300	N	1	3	7	<.05	<.05	<1	<1
STU0644R	300	N	2	4	12	<.05	.06	1	<1

TABLE 1.—ROCK SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	LATITUDE	LONGITUDE	(.05) S-FE%	(.02) S-MG%	(.05) S-CA%	(.002) S-TI%	(10) S-MN	(5) S-AG	(200) S-AS	(10) S-AU	(10) S-B	(20) S-BA	(1) S-BE	(10) S-BI
STU0645R	47 2 31	113 56 25	5.00	.70	.30	.300	500	N	N	N	70	700	1.5	N
STU0646R	47 2 48	113 56 33	10.00	1.00	.15	.500	700	N	N	N	150	700	3.0	N
STU0647R	47 2 38	113 56 53	3.00	1.00	.30	.300	500	N	N	N	150	500	2.0	N
STU0648R	47 0 19	113 55 3	3.00	1.50	.07	.300	150	N	N	N	200	300	2.0	N
STU0649R	47 0 2	113 54 35	3.00	1.50	<.05	.200	150	N	N	N	200	300	1.5	N
STU0653R	47 0 15	113 54 55	.70	.50	<.05	.050	300	N	N	N	70	100	1.5	N
STU0672R	47 3 37	113 55 58	5.00	3.00	1.50	.300	1,000	N	N	N	200	700	3.0	N
STU0673R	47 3 37	113 55 58	5.00	2.00	.30	.300	1,000	N	N	N	150	300	1.5	N
STU0674R	47 4 8	113 54 24	.70	.30	<.05	.050	20	N	N	N	150	300	<1.0	N
STU0675R	47 5 13	113 53 54	5.00	1.50	.10	.500	500	N	N	N	200	700	2.0	N
STU0676R	47 2 29	113 54 54	5.00	1.50	.30	.500	500	N	N	N	150	300	2.0	N
STU0677R	47 3 11	113 58 5	3.00	1.50	.30	.500	300	N	N	N	200	700	1.5	N
STU0678R	47 1 57	113 58 42	3.00	1.50	.15	.300	300	N	N	N	200	700	3.0	N
STU0679R	47 0 58	113 56 46	5.00	1.00	.15	.700	500	N	N	N	70	700	2.0	N
STU0680R	47 1 32	113 53 41	3.00	1.00	.07	.500	300	N	N	N	100	700	1.5	N
STU0682R	47 6 16	113 54 49	3.00	1.50	.10	.500	500	N	N	N	150	1,000	3.0	N
STU0800R	47 3 25	113 58 26	1.00	.30	.05	.300	70	N	N	N	100	300	1.0	N
STU0801R	47 3 28	113 57 56	.70	.70	.05	.150	300	N	N	N	70	100	1.(	N
STU0802R	47 3 32	113 57 26	2.00	1.50	.05	.200	300	N	N	N	100	300	3.0	N
STU0803R	47 3 54	113 56 54	5.00	1.50	.15	.300	500	N	N	N	100	500	2.0	N
STU0804R	47 4 35	113 56 54	3.00	1.50	.10	.300	200	N	N	N	150	300	2.0	N
WLA0002R	47 0 12	113 48 44	.50	.20	<.05	.070	70	N	N	N	20	700	1.0	N
WLA0034R	47 0 12	113 48 44	.50	.20	.07	.070	70	N	N	N	10	700	1.0	N
WLA0277R	47 4 57	113 51 35	3.00	.70	.07	.300	150	N	N	N	150	700	2.0	N
WLA0278R	47 5 10	113 52 9	3.00	1.00	.07	.300	300	N	N	N	200	500	2.0	N
WLA0279R	47 5 32	113 52 29	3.00	1.00	.50	.500	500	N	N	N	150	500	1.5	N
WLA0630R	47 2 4	113 51 28	2.00	1.50	.30	.200	200	N	N	N	150	200	2.0	N
WLA0631R	47 2 4	113 51 28	1.00	.70	.07	.100	70	N	N	N	100	200	1.5	N
WLA0665R	47 0 13	113 51 9	5.00	2.00	.70	.300	1,000	N	N	N	150	700	1.5	N
WLA0666R	47 0 13	113 51 6	2.00	1.00	1.50	.150	700	N	N	N	50	300	1.0	N
WLA0671R	47 4 1	113 52 3	7.00	2.00	.20	.500	500	N	N	N	200	700	3.0	N
WLA0681R	47 1 21	113 52 15	3.00	1.50	.50	.500	1,000	N	N	N	150	700	10.0	N
WLA0820R	47 4 22	113 51 20	1.50	.50	.05	.100	150	N	N	N	70	150	<1.0	N
WLA0821R	47 4 1	113 50 42	2.00	.50	.10	.200	150	N	N	N	100	300	2.0	N
WLA0822R	47 3 50	113 50 5	3.00	1.50	.07	.300	200	N	N	N	150	300	1.5	N
WLA0823R	47 3 8	113 49 41	3.00	.70	.10	.200	300	N	N	N	100	700	2.0	N
WLA0824R	47 2 41	113 49 55	5.00	1.50	.20	.300	500	N	N	N	70	300	1.5	N
WLA0825R	47 2 29	113 50 22	5.00	7.00	15.00	.150	1,000	N	N	N	100	3,000	1.5	N
WLA0826R	47 2 3	113 49 59	2.00	3.00	5.00	.200	700	N	N	N	70	300	1.5	N
WLA0827R	47 1 43	113 49 54	1.50	2.00	.07	.200	100	N	N	N	70	150	1.0	N

TABLE 1.—ROCK SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(20) S-CD	(5) S-CO	(10) S-CR	(5) S-CU	(20) S-LA	(5) S-MO	(20) S-NB	(5) S-NI	(10) S-PB	(100) S-SB	(5) S-SC	(10) S-SN	(100) S-SR	(10) S-V	(50) S-W	(10) S-Y	(200) S-ZN
STU0645R	N	7	100	<5	70	N	<20	15	15	N	10	N	<100	100	N	70	N
STU0646R	N	15	100	70	70	N	<20	30	30	N	15	N	<100	150	N	50	N
STU0647R	N	10	30	<5	50	N	<20	15	20	N	10	N	<100	100	N	30	N
STU0648R	N	7	70	7	30	N	<20	30	10	N	10	N	<100	100	N	20	N
STU0649R	N	7	50	50	30	N	<20	20	15	N	7	N	<100	70	N	15	N
STU0653R	N	5	<10	15	20	N	N	5	10	N	<5	N	N	15	N	N	N
STU0672R	N	10	50	20	150	N	<20	20	15	N	10	N	N	100	N	70	N
STU0673R	N	10	100	<5	20	N	<20	20	10	N	10	N	N	100	N	30	N
STU0674R	N	<5	10	<5	20	N	N	5	20	N	N	N	N	15	N	15	N
STU0675R	N	10	150	7	50	N	<20	30	10	N	20	N	N	100	N	50	N
STU0676R	N	15	100	5	70	N	<20	30	20	N	20	N	<100	100	N	70	N
STU0677R	N	7	70	<5	30	N	<20	15	15	N	10	N	N	70	N	30	N
STU0678R	N	15	100	<5	70	N	<20	30	20	N	15	N	<100	150	N	50	N
STU0679R	N	15	100	20	100	N	<20	30	30	N	15	N	100	150	N	50	N
STU0680R	N	10	100	5	70	N	<20	20	10	N	15	N	<100	100	N	30	N
STU0682R	N	10	100	<5	50	<5	<20	30	<10	N	15	N	N	100	N	50	N
STU0800R	N	<5	15	<5	30	N	<20	5	15	N	<5	N	N	20	N	30	N
STU0801R	N	N	20	<5	30	N	<20	7	15	N	<5	N	<100	15	N	<10	N
STU0802R	N	7	15	N	30	N	<20	10	15	N	7	N	N	30	N	50	N
STU0803R	N	7	100	50	70	N	<20	20	100	N	10	N	100	70	N	50	N
STU0804R	N	10	30	<5	30	N	<20	15	10	N	10	N	N	50	N	30	N
WLA0002R	N	N	10	<5	30	N	N	5	15	N	N	N	<100	15	N	<10	N
WLA0034R	N	<5	10	<5	30	N	<20	<5	15	N	N	N	N	15	N	N	N
WLA0277R	N	7	50	N	30	N	<20	20	10	N	10	N	N	50	N	30	N
WLA0278R	N	10	50	<5	50	N	<20	20	10	N	10	N	N	50	N	30	N
WLA0279R	N	10	70	7	30	N	<20	20	15	N	10	N	N	50	N	30	N
WLA0630R	N	5	50	<5	30	N	N	10	15	N	7	N	N	50	N	20	N
WLA0631R	N	5	15	<5	20	N	N	10	15	N	5	N	N	30	N	10	N
WLA0665R	N	10	100	10	<20	N	<20	30	20	N	10	N	<100	100	N	50	N
WLA0666R	N	5	20	<5	20	N	<20	10	10	N	<5	N	<100	30	N	30	N
WLA0671R	N	15	200	20	70	N	<20	50	20	N	20	N	<100	150	N	70	N
WLA0681R	N	7	70	5	70	N	<20	20	30	N	10	N	N	100	N	100	N
WLA0820R	N	<5	30	<5	20	N	<20	7	<10	N	5	N	<100	30	N	15	N
WLA0821R	N	7	50	<5	30	N	<20	15	<10	N	7	N	N	50	N	30	N
WLA0822R	N	10	70	<5	30	N	<20	20	10	N	7	N	N	70	N	50	N
WLA0823R	N	7	100	20	30	N	<20	20	<10	N	7	N	<100	70	N	30	N
WLA0824R	N	7	100	15	50	N	<20	30	15	N	10	N	N	100	N	50	N
WLA0825R	N	10	50	7	30	N	N	20	15	N	7	N	300	50	N	30	N
WLA0826R	N	7	70	7	30	N	<20	20	10	N	7	N	100	30	N	30	N
WLA0827R	N	7	50	<5	50	N	<20	7	10	N	5	N	<100	30	N	20	N

TABLE 1.--ROCK SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(10) S-ZR	(%X0) S-TH	(1) AA-CU	(1) AA-PB	(1) AA-ZN	(05) AA-AG	(05) AA-CD	(1) AA-BI	(1) AA-SB
STU0645R	500	N	1	3	5	<.05	.09	<1	<1
STU0646R	300	N	18	12	19	<.05	.08	1	<1
STU0647R	300	N	3	3	4	<.05	<.05	<1	<1
STU0648R	500	N	<1	1	2	<.05	<.05	<1	<1
STU0649R	300	N	10	1	2	<.05	<.05	<1	<1
STU0653R	150	N	5	5	3	<.05	.06	1	<1
STU0672R	300	N	8	3	7	<.05	<.05	<1	<1
STU0673R	300	N	2	2	12	<.05	.07	1	<1
STU0674R	50	N	<1	1	<1	<.05	<.05	<1	<1
STU0675R	300	N	1	1	7	<.05	.05	<1	<1
STU0676R	700	N	<1	3	5	<.05	<.05	<1	<1
STU0677R	300	N	<1	2	3	<.05	<.05	<1	<1
STU0678R	500	N	<1	3	10	<.05	.07	<1	<1
STU0679R	500	N	6	6	10	<.05	.05	<1	<1
STU0680R	300	N	1	2	6	<.05	<.05	<1	<1
STU0682R	300	N	1	1	10	<.05	.05	<1	<1
STU0800R	300	N	<1	1	6	<.05	<.05	<1	<1
STU0801R	100	N	<1	4	7	<.05	<.05	<1	<1
STU0802R	150	N	<1	5	4	<.05	<.05	<1	<1
STU0803R	300	N	8	46	5	<.05	<.05	<1	<1
STU0804R	300	N	<1	2	3	<.05	<.05	<1	<1
WLA0002R	50	N	<1	1	1	<.05	<.05	<1	<1
WLA0034R	70	N	1	1	1	<.05	<.05	<1	<1
WLA0277R	300	N	<1	2	1	<.05	.05	<1	<1
WLA0278R	500	N	<1	2	3	<.05	.07	<1	<1
WLA0279R	500	N	1	1	3	<.05	.09	<1	<1
WLA0630R	500	N	1	2	3	<.05	<.05	<1	<1
WLA0631R	150	N	1	3	2	<.05	<.05	<1	<1
WLA0665R	300	N	4	4	20	<.05	.06	<1	<1
WLA0666R	100	N	<1	2	5	<.05	<.05	1	<1
WLA0671R	300	N	6	5	7	<.05	<.05	1	1
WLA0681R	300	N	1	10	13	<.05	.12	1	<1
WLA0820R	150	N	<1	1	4	<.05	<.05	<1	<1
WLA0821R	200	N	<1	1	3	<.05	<.05	<1	<1
WLA0822R	700	N	<1	1	4	<.05	<.05	<1	<1
WLA0823R	300	N	3	2	10	<.05	<.05	<1	<1
WLA0824R	300	N	1	2	4	<.05	<.05	<1	<1
WLA0825R	70	N	1	2	11	<.05	<.05	<1	<1
WLA0826R	200	N	1	3	9	<.05	.07	<1	<1
WLA0827R	300	N	<1	1	2	<.05	<.05	<1	<1

TABLE 2.--STREAM-SEDIMENT SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA

Sample	LATITUDE	LONGITUDE	(.05) S-FE%	(.02) S-MG%	(.05) S-CA%	(.002) S-TI%	(10) S-MN	(5) S-AG	(200) S-AS	(10) S-AU	(10) S-B	(20) S-BA	(1) S-BE	(10) S-BI	(20) S-CD
BLP00035	46 58 36	113 50 12	2.00	.50	.10	.20	300	N	N	N	70	500	1.5	N	N
BLP00065	46 58 42	113 50 14	3.00	.10	.70	.50	700	N	N	N	200	1,000	3.0	N	N
BLP02065	46 59 22	113 47 3	3.00	.50	.15	.20	1,000	N	N	N	300	700	3.0	N	N
BLP02085	46 59 23	113 47 8	3.00	.70	.30	.50	1,000	N	N	N	300	1,000	3.0	N	N
BLP02105	46 59 19	113 47 12	2.00	.50	.30	.20	500	N	N	N	300	1,000	5.0	N	N
BLP02125	46 58 47	113 47 58	3.00	.50	.30	.30	1,500	N	N	N	200	1,000	3.0	N	N
BLP02145	46 58 31	113 48 22	3.00	.70	.50	.30	700	N	N	N	200	1,500	3.0	N	N
BLP02165	46 58 27	113 48 35	2.00	.70	.70	.20	1,000	N	N	N	150	1,500	7.0	N	N
BLP02185	46 58 31	113 48 44	2.00	.50	.50	.20	700	N	N	N	150	1,000	5.0	N	N
BLP02205	46 58 24	113 48 57	2.00	.50	.50	.20	500	N	N	N	100	700	3.0	N	N
BLP02225	46 58 24	113 49 19	2.00	.50	.50	.20	700	N	N	N	70	700	3.0	N	N
BLP04355	46 56 57	113 50 45	3.00	.50	.50	.50	700	20.0	N	N	100	700	1.5	N	N
BLP04405	46 56 44	113 51 39	3.00	.50	.70	.50	2,000	N	N	N	150	700	2.0	N	N
BLP04415	46 56 32	113 51 49	3.00	.70	.20	.30	500	N	N	N	200	700	2.0	N	N
BLP05625	46 53 16	113 50 37	2.00	.50	.70	.30	300	<.5	N	N	100	1,500	3.0	N	N
BLP05655	46 53 19	113 50 27	3.00	.70	.50	.30	300	N	N	N	150	1,000	3.0	N	N
BLP05675	46 53 30	113 49 49	3.00	.70	.30	.30	500	N	N	N	70	700	3.0	N	N
BLP05695	46 54 1	113 47 48	3.00	.70	.70	.30	300	N	N	N	100	700	3.0	N	N
BLP05715	46 54 19	113 45 4	3.00	.70	.70	.50	300	N	N	N	150	1,000	3.0	N	N
BLP05795	46 52 36	113 52 10	3.00	.70	1.50	.70	700	N	N	N	70	700	2.0	N	N
BLP14895	46 55 52	113 45 17	2.00	.50	.20	.50	300	N	N	N	150	500	3.0	N	N
BLP14915	46 55 54	113 45 15	1.50	.50	.20	.30	300	N	N	N	100	1,500	3.0	N	N
BLP14935	46 56 26	113 45 55	2.00	.50	.30	.50	500	N	N	N	100	1,000	3.0	N	N
BLP14955	46 56 50	113 46 33	.70	.30	.50	.15	500	N	N	N	50	500	5.0	N	N
BLP14975	46 56 30	113 46 33	1.00	.30	.30	.30	500	N	N	N	50	1,000	5.0	N	N
BLP14995	46 57 28	113 45 23	2.00	1.00	.50	.30	1,000	N	N	N	200	2,000	7.0	N	N
BLP18615	46 59 38	113 50 4	3.00	.50	.50	.30	500	N	N	N	100	1,500	3.0	N	N
BLP18625	46 59 35	113 50 22	.70	.30	.30	.15	500	N	N	N	50	700	5.0	N	N
BLP18645	46 58 35	113 50 6	1.50	.30	.30	.15	500	N	N	N	70	700	3.0	N	N
BLP18665	46 58 52	113 50 8	2.00	.70	.50	.30	300	N	N	N	70	700	3.0	N	N
BLP18675	46 58 59	113 50 11	1.50	.30	.70	.15	500	N	N	N	30	700	5.0	N	N
BLP19625	46 58 2	113 51 53	3.00	.70	.30	.30	500	N	N	N	100	700	2.0	N	N
BLP19645	46 57 59	113 51 48	2.00	.70	.20	.30	500	N	N	N	150	700	2.0	N	N
BLP19655	46 57 43	113 52 18	2.00	.70	.50	.30	200	N	N	N	100	1,500	3.0	N	N
BLP19675	46 58 7	113 52 0	3.00	.70	.30	.30	500	N	N	N	150	1,000	3.0	N	N
BLP19685	46 58 30	113 50 44	3.00	1.00	.50	.50	700	N	N	N	150	1,000	3.0	N	N
BLP19505	46 55 39	113 50 39	3.00	.50	.30	.30	500	N	N	N	200	1,000	3.0	N	N
BLP19525	46 55 37	113 50 38	3.00	.70	.70	.30	700	N	N	N	300	1,000	3.0	N	N
BLP19535	46 55 36	113 50 43	3.00	.70	.70	.30	700	N	N	N	300	700	2.0	N	N
BLP28085	46 52 55	113 50 38	2.00	.30	1.00	.20	300	N	N	N	70	1,000	3.0	N	N
BLP28105	46 53 5	113 47 57	2.00	.70	.50	.30	300	N	N	N	200	1,000	3.0	N	N
BLP28125	46 53 5	113 48 5	.70	.50	.70	.20	500	N	N	N	100	1,000	7.0	N	N
BLP28145	46 53 15	113 46 52	2.00	1.00	1.00	.50	500	N	N	N	150	1,000	7.0	N	N
BLP28165	46 53 44	113 46 12	3.50	.50	.50	.30	500	N	N	N	150	2,000	7.0	N	N
NEM00145	46 55 20	113 54 1	3.00	.50	.50	.30	500	N	N	N	500	1,000	2.0	N	N

TABLE 2.--STREAM-SEDIMENT SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(5) S-CO	(10) S-CR	(5) S-CU	(20) S-LA	(5) S-MO	(20) S-NB	(5) S-NI	(10) S-PB	(100) S-SB	(5) S-SC	(10) S-SN	(100) S-SR	(10) S-V	(50) S-W	(10) S-Y	(200) S-ZN	(10) S-ZR
BLP00035	5	20	7	20	N	<20	7	20	N	5	N	<100	50	N	20	N	100
BLP00065	7	70	30	70	N	<20	20	30	N	10	N	<100	70	N	50	N	500
BLP02065	20	50	20	30	N	<20	10	30	N	7	N	<100	70	N	20	N	200
BLP02085	7	100	20	30	N	<20	20	30	N	10	N	100	70	N	30	N	700
BLP02105	7	50	15	30	N	<20	15	30	N	7	N	100	50	N	30	N	500
BLP02125	10	50	15	30	N	<20	15	30	N	7	N	100	70	N	30	N	200
BLP02145	7	50	20	30	N	<20	15	30	N	10	N	100	70	N	50	N	200
BLP02165	7	70	20	30	N	<20	20	30	N	7	N	100	70	N	50	N	200
BLP02185	5	50	20	30	N	<20	10	30	N	7	N	100	50	N	70	N	150
BLP02205	7	50	20	30	N	<20	15	20	N	10	N	<100	50	N	30	N	200
BLP02225	7	50	15	30	N	<20	10	30	N	10	N	100	70	N	50	N	150
BLP04355	7	50	20	30	N	<20	10	20	N	10	N	150	100	N	30	N	500
BLP04405	7	70	30	30	N	<20	15	70	N	10	N	150	100	N	20	N	300
BLP04415	<5	30	15	30	N	<20	10	30	N	10	N	100	100	N	20	N	300
BLP05625	7	30	30	70	N	<20	50	30	N	10	N	100	30	N	100	N	150
BLP05655	7	70	20	50	5	<20	50	30	N	10	N	<100	50	N	30	N	200
BLP05675	10	50	20	50	N	<20	30	30	N	15	N	N	50	N	50	N	200
BLP05695	7	50	20	50	5	<20	50	20	N	15	N	<100	70	N	70	N	300
BLP05715	7	70	20	50	N	<20	20	20	N	10	N	<100	70	N	50	N	150
BLP05795	15	50	30	50	<5	<20	20	50	N	10	15	100	50	N	30	N	300
BLP14895	5	100	15	50	N	<20	20	20	N	7	N	<100	50	N	70	N	300
BLP14915	5	70	15	50	N	<20	10	30	N	7	N	<100	50	N	30	N	300
BLP14935	5	70	20	50	N	<20	15	30	N	5	N	<100	50	N	30	N	300
BLP14955	5	15	10	20	N	N	10	10	N	7	N	<100	30	N	30	N	300
BLP14975	7	30	10	20	N	<20	10	15	N	7	N	<100	30	N	30	N	300
BLP14995	7	30	30	50	N	<20	20	30	N	7	N	<100	50	N	100	N	300
BLP18615	7	30	20	30	N	<20	15	30	N	10	N	150	50	N	20	N	150
BLP18625	<5	10	15	50	N	N	10	50	N	5	N	N	30	N	30	N	100
BLP18645	7	20	20	30	N	<20	15	30	N	5	N	N	30	N	30	N	100
BLP18665	5	70	15	70	N	<20	10	20	N	7	N	<100	50	N	50	N	300
BLP18675	<5	30	15	50	N	N	5	30	N	7	N	100	50	N	30	N	150
BLP19425	7	50	20	50	N	<20	20	20	N	10	N	100	50	N	50	N	300
BLP19445	7	20	20	30	N	<20	15	20	N	7	N	<100	50	N	30	N	300
BLP19455	7	50	20	50	N	<20	20	30	N	10	N	100	70	N	50	N	150
BLP19475	7	50	20	50	N	<20	30	20	N	10	N	<100	70	N	50	N	300
BLP19485	15	70	50	50	N	20	30	30	N	20	N	100	100	N	70	N	700
BLP19505	7	70	20	100	N	<20	50	20	N	10	N	100	70	N	30	N	700
BLP19525	10	50	20	50	<5	<20	70	20	N	15	N	<100	70	N	30	N	700
BLP19535	10	50	20	50	N	<20	50	30	N	10	N	N	70	N	30	N	200
BLP28085	<5	30	50	30	N	<20	10	20	N	10	N	<100	30	N	50	N	100
BLP28105	7	20	20	30	N	<20	15	20	N	5	N	N	50	N	30	N	300
BLP28125	N	15	15	50	N	N	10	20	N	7	N	<100	50	N	70	N	200
BLP28145	7	100	30	30	N	<20	20	30	N	7	20	<100	70	N	50	N	500
BLP28165	7	50	15	50	N	<20	20	30	N	7	N	<100	50	N	30	N	300
NEM00145	7	50	30	50	N	<20	30	20	N	10	N	<100	50	N	50	N	700

TABLE 2.--STREAM-SEDIMENT SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(100) S-TH	(1.0) AA-CU	(1.0) AA-PB	(1.0) AA-ZN	(.05) AA-AG	(.05) AA-CD	(.5) AA-CO	(10) AA-BI	(1) AA-SB
BLP00035	N	<1.0	<1.0	<1.0	<.05	<.05	<.5	--	<1
BLP00065	N	1.5	1.7	1.2	<.05	<.05	--	<10	<1
BLP02065	N	1.0	1.6	1.8	<.05	<.05	<.5	--	<1
BLP02085	N	1.0	1.0	1.5	<.05	<.05	<.5	--	<1
BLP02105	N	<1.0	1.3	<1.0	<.05	<.05	<.5	--	<1
BLP02125	N	<1.0	1.4	<1.0	<.05	<.05	<.5	--	<1
BLP02145	N	<1.0	1.5	1.5	<.05	<.05	<.5	--	<1
BLP02165	N	1.2	2.5	2.0	<.05	<.05	<.5	--	<1
BLP02185	N	1.2	2.3	1.5	<.05	<.05	<.5	--	<1
BLP02205	N	<1.0	1.3	1.4	<.05	<.05	<.5	--	<1
BLP02225	N	1.7	1.7	1.8	<.05	<.05	<.5	--	<1
BLP04355	N	<1.0	1.1	1.4	<.05	<.05	<.5	--	<1
BLP04405	N	1.4	4.1	3.6	<.05	<.05	<.5	--	<1
BLP04415	N	<1.0	1.9	1.5	<.05	<.05	<.5	--	<1
BLP05625	N	21.0	12.0	10.0	.06	.14	--	<1.0	<1
BLP05655	N	8.0	12.0	8.0	<.05	.07	--	2.5	<1
BLP05675	N	10.0	15.0	6.0	<.05	.06	--	<1.0	<1
BLP05695	N	7.0	7.0	6.0	.05	.06	--	<1.0	<1
BLP05715	N	6.0	4.0	4.0	<.05	<.05	--	<1.0	<1
BLP05795	N	2.8	2.5	3.5	<.05	<.05	--	<1.0	<1
BLP14895	N	6.0	6.0	18.0	<.05	<.05	--	1.0	N
BLP14915	N	4.0	6.0	11.0	<.05	<.05	--	N	N
BLP14935	N	9.0	11.0	9.0	.06	.17	--	1.0	N
BLP14955	N	--	--	--	--	--	--	--	--
BLP14975	N	--	--	--	--	--	--	--	--
BLP14995	N	24.0	22.0	21.0	.20	.33	--	1.0	N
BLP18615	N	1.0	1.5	1.8	<.05	<.05	--	<1.0	<1
BLP18625	N	1.8	7.0	3.5	<.05	.05	--	<1.0	<1
BLP18645	N	1.5	2.5	3.2	<.05	.05	--	<1.0	<1
BLP18665	N	<1.0	1.6	1.0	<.05	<.05	--	<1.0	<1
BLP18675	N	1.0	5.0	2.0	<.05	<.05	--	<1.0	<1
BLP19425	N	1.2	1.0	1.3	<.05	<.05	--	<1.0	<1
BLP19445	N	<1.0	<1.0	<1.0	<.05	<.05	--	<1.0	<1
BLP19455	N	1.5	<1.0	<1.0	<.05	<.05	--	<1.0	<1
BLP19475	N	1.1	<1.0	<1.0	<.05	<.05	--	<1.0	<1
BLP19485	N	3.0	2.3	1.7	<.05	<.05	--	<1.0	<1
BLP19505	N	<1.0	<1.0	<1.0	<.05	<.05	--	<1.0	<1
BLP19525	N	1.1	1.2	1.2	<.05	<.05	--	<1.0	<1
BLP19535	N	1.2	1.7	1.8	<.05	<.05	--	<1.0	<1
BLP28085	N	8.9	2.6	2.5	<.05	<.05	--	<1.0	<1
BLP28115	N	18.0	7.0	6.0	.08	.30	--	N	N
BLP28125	N	26.0	14.0	13.0	.20	.51	--	N	N
BLP28145	N	21.0	14.0	7.0	.07	.20	--	N	N
BLP28165	N	7.0	7.0	7.0	<.05	.19	--	N	N
NEM00145	N	2.0	1.0	1.2	<.05	<.05	<.5	--	<1

TABLE 2.--STREAM-SEDIMENT SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	LATITUDE	LONGITUDE	(.05) S-FE%	(.02) S-MG%	(.05) S-CA%	(.002) S-TI%	(10) S-MN	(5) S-AG	(200) S-AS	(10) S-AU	(10) S-B	(20) S-BA	(1) S-BE	(10) S-BI	(20) S-CO
NEM00155	46 55 22	113 54 14	3.00	1.00	1.00	.50	700	N	N	N	300	1,000	2.0	N	N
NEM00335	46 57 41	113 53 38	2.00	.50	.20	.20	300	N	N	N	300	1,000	2.0	N	N
NEM02245	46 58 16	113 56 36	2.00	.50	.70	.20	700	<.5	N	N	100	1,000	3.0	N	N
NEM02265	46 58 18	113 56 39	3.00	.70	.30	.30	700	N	N	N	150	1,000	2.0	N	N
NEM02275	46 59 44	113 57 19	3.00	1.00	.50	.30	700	N	N	N	200	2,000	2.0	N	N
NEM02295	46 59 57	113 57 2	3.00	.50	.50	.30	700	N	N	N	200	700	2.0	N	N
NEM02325	46 58 42	113 55 20	2.00	.50	.20	.30	700	N	N	N	70	500	2.0	N	N
NEM02355	46 59 21	113 54 27	2.00	.30	.50	.30	1,000	N	N	N	100	1,000	3.0	N	N
NEM04025	46 54 54	113 56 3	3.00	.70	.70	.30	1,000	N	N	N	200	1,000	2.0	N	N
NEM04045	46 55 9	113 56 28	3.00	.70	.50	.50	1,500	N	N	N	300	1,000	2.0	N	N
NEM04065	46 55 52	113 56 43	5.00	.70	1.00	.30	700	N	N	N	300	1,500	2.0	N	N
NEM04085	46 56 51	113 55 59	3.00	.70	.20	.50	300	N	N	N	200	700	2.0	N	N
NEM04105	46 57 23	113 55 10	2.00	.30	.50	.20	500	N	N	N	150	1,000	3.0	N	N
NEM04145	46 57 4	113 55 14	2.00	.50	1.00	.30	300	N	N	N	200	1,000	3.0	N	N
NEM04155	46 57 4	113 55 14	3.00	.70	1.00	.30	500	N	N	N	200	1,000	3.0	N	N
NEM05815	46 53 8	113 53 36	3.00	1.50	1.00	.50	500	N	N	N	70	700	2.0	N	N
NEM05835	46 53 31	113 55 27	2.00	1.00	.50	.50	700	N	N	N	300	1,000	3.0	N	N
NEM05855	46 54 12	113 53 58	2.00	.50	1.50	.50	1,500	N	N	N	100	500	5.0	N	N
NEM05875	46 56 9	113 58 50	3.00	1.00	10.00	.30	500	N	N	N	70	700	2.0	N	N
NEM05885	46 56 29	113 58 14	3.00	1.50	.70	.30	500	N	N	N	70	700	2.0	N	N
NEM05905	46 56 27	113 58 5	3.00	1.00	.50	.50	500	N	N	N	200	1,000	2.0	N	N
NEM06105	46 56 51	113 55 59	2.00	.50	.15	.30	300	N	N	N	150	700	1.5	N	N
NEM08085	46 57 56	113 57 21	3.00	1.00	.50	.70	1,000	N	N	N	150	1,000	1.5	N	N
NEM08105	46 57 55	113 57 15	3.00	.70	.70	.50	700	N	N	N	150	1,000	2.0	N	N
NEM08115	46 59 58	113 57 4	2.00	.30	.70	.20	500	N	N	N	70	1,000	5.0	N	N
NEM18695	46 58 49	113 58 46	3.00	.70	.70	.50	500	N	N	N	70	1,000	2.0	N	N
NEM18715	46 58 44	113 58 47	3.00	1.00	1.00	.50	300	N	N	N	100	700	2.0	N	N
NEM19405	46 57 29	113 53 26	2.00	.50	.20	.30	300	N	N	N	70	700	1.5	N	N
STU00095	47 0 56	113 59 52	10.00	1.50	1.50	>1.00	1,500	N	N	N	300	1,500	1.0	N	N
STU00115	47 0 51	113 59 54	3.00	.70	1.50	.70	1,000	<.5	N	N	200	1,000	1.5	N	N
STU00225	47 5 2	113 55 24	5.00	1.00	1.00	.70	700	N	N	N	150	1,000	2.0	N	N
STU00235	47 4 51	113 55 24	3.00	.50	.50	.50	500	N	N	N	100	1,000	3.0	N	N
STU00245	47 4 55	113 55 38	3.00	.70	.10	.50	150	N	N	N	200	700	1.5	N	N
STU00255	47 4 52	113 55 47	.15	.07	.50	.07	300	N	N	N	20	300	2.0	N	N
STU00265	47 4 43	113 54 28	2.00	.30	.50	.30	500	N	N	N	30	500	3.0	N	N
STU00275	47 4 46	113 54 0	3.00	.70	.70	.50	1,000	N	N	N	200	1,000	3.0	N	N
STU00285	47 4 11	113 53 17	3.00	.70	.70	.30	500	N	N	N	300	1,500	3.0	N	N
STU00295	47 4 14	113 53 10	3.00	.70	.50	.50	700	N	N	N	300	1,000	2.0	N	N
STU00305	47 4 11	113 53 17	3.00	.70	.50	.50	300	N	N	N	200	1,000	3.0	N	N
STU02025	47 2 43	113 52 48	3.00	.70	.50	.70	700	N	N	N	200	1,000	2.0	N	N
STU02045	47 2 45	113 52 47	3.00	.70	.20	.20	500	N	N	N	200	700	1.0	N	N
STU02425	47 2 43	113 59 59	2.00	.30	1.50	.20	700	<.5	N	N	100	1,000	3.0	N	N
STU02445	47 4 0	113 59 40	2.00	.50	.70	.20	700	N	N	N	50	1,500	3.0	N	N
STU02465	47 3 42	113 59 4	.30	.20	.70	.10	200	<.5	N	N	20	700	2.0	N	N
STU02485	47 4 47	113 57 44	1.00	.30	.50	.15	500	N	N	N	50	1,500	5.0	N	N

TABLE 2.--STREAM-SEDIMENT SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(5) S-CO	(10) S-CR	(5) S-CU	(20) S-LA	(5) S-MO	(20) S-NB	(5) S-NI	(10) S-PB	(100) S-SB	(5) S-SC	(10) S-SN	(100) S-SR	(10) S-V	(50) S-W	(10) S-Y	(200) S-ZN	(10) S-ZR
NEM00135	7	100	70	50	N	<20	30	30	N	10	N	100	100	N	50	N	700
NEM00335	5	50	15	30	N	N	15	20	N	7	N	<100	50	N	30	N	300
NEM02245	<5	30	70	30	N	<20	10	30	N	10	N	100	70	N	70	N	150
NEM02265	7	50	30	30	N	<20	15	30	N	10	N	<100	70	N	70	N	300
NEM02275	7	50	50	30	N	<20	10	50	N	10	N	<100	50	N	70	N	300
NEM02295	7	50	20	30	N	<20	15	20	N	10	N	<100	70	N	30	N	300
NEM02325	7	50	15	30	N	<20	15	20	N	7	N	<100	50	N	30	N	200
NEM02355	7	50	20	30	N	<20	10	30	N	7	N	<100	50	N	30	N	300
NEM04025	7	70	70	30	N	<20	20	30	N	10	N	<100	70	N	50	N	300
NEM04045	10	70	30	30	N	<20	20	30	N	15	N	<100	70	N	50	N	300
NEM04065	7	70	70	50	N	<20	50	30	N	15	<10	100	100	N	100	N	300
NEM04085	5	50	15	30	N	<20	15	20	N	7	N	<100	70	N	50	N	300
NEM04105	7	20	20	30	N	<20	15	20	N	7	N	N	50	N	50	N	200
NEM04145	7	30	30	30	N	<20	15	20	N	10	N	100	50	N	50	N	200
NEM04155	7	50	50	50	N	<20	20	20	N	10	N	100	100	N	50	N	150
NEM05815	10	100	70	50	N	<20	30	20	N	15	N	100	70	N	70	N	300
NEM05835	10	50	20	30	N	<20	20	50	N	7	N	<100	70	N	50	N	300
NEM05855	10	15	70	30	N	<20	20	20	N	10	N	100	100	N	50	N	200
NEM05875	10	70	20	50	N	<20	20	20	N	10	N	<100	50	N	30	N	300
NEM05885	10	50	20	50	N	<20	15	20	N	10	N	<100	50	N	30	N	200
NEM05905	10	30	20	20	N	<20	15	30	N	7	N	N	50	N	50	N	300
NEM06105	5	50	15	30	N	<20	10	10	N	7	N	<100	70	N	20	N	300
NEM08085	10	70	30	50	N	<20	20	20	N	15	N	<100	100	N	30	N	300
NEM08105	7	50	20	50	<5	<20	15	20	N	10	N	<100	100	N	30	200	300
NEM08115	7	20	20	50	N	<20	10	30	N	7	N	100	70	N	50	200	150
NEM18695	7	50	30	70	N	<20	15	15	N	10	N	<100	50	N	50	N	300
NEM18715	10	50	70	50	N	<20	20	20	N	15	N	<100	50	N	70	N	300
NEM19405	7	50	15	50	N	<20	15	20	N	7	N	<100	50	N	30	500	300
STU00095	30	100	100	50	N	<20	50	30	N	20	N	100	200	N	70	N	700
STU00115	7	70	70	30	N	N	20	50	N	10	N	100	100	N	30	N	500
STU00225	7	100	100	30	N	<20	20	70	N	10	N	150	100	N	50	N	500
STU00235	5	70	30	30	N	<20	15	50	N	10	N	<100	100	N	30	N	200
STU00245	5	70	10	30	N	<20	10	30	N	7	N	N	100	N	20	N	300
STU00255	<5	10	10	20	N	N	<5	20	N	N	N	N	20	N	10	N	70
STU00265	5	20	15	30	N	N	5	30	N	5	N	N	50	N	20	N	200
STU00275	10	50	30	30	N	<20	20	30	N	10	N	100	70	N	50	N	200
STU00285	7	70	50	30	N	<20	20	20	N	10	N	100	70	N	70	N	300
STU00295	7	50	20	30	N	<20	20	30	N	10	N	<100	70	N	30	N	300
STU00305	7	50	100	30	N	<20	15	150	N	10	N	<100	100	N	30	N	200
STU02025	7	30	20	50	N	<20	10	20	N	10	N	<100	150	N	30	N	300
STU02045	7	50	15	30	N	N	15	30	N	7	N	<100	50	N	20	N	200
STU02425	N	50	20	30	N	N	7	30	N	10	N	100	50	N	50	N	150
STU02445	<5	50	50	30	N	N	7	30	N	7	N	<100	30	N	50	N	200
STU02465	N	15	15	30	N	N	<5	20	N	<5	N	<100	30	N	30	N	100
STU02485	5	15	15	30	N	N	<5	30	N	<5	N	<100	30	N	30	N	100

TABLE 2.--STREAM-SEDIMENT SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(100) S-TH	(1.0) AA-CU	(1.0) AA-PB	(1.0) AA-ZN	(.05) AA-AG	(.05) AA-CD	(.5) AA-CO	(10) AA-BI	(1) AA-SB
NEM00155	N	4.0	1.5	1.0	<.05	<.05	--	1.0	<1
NEM00335	N	<1.0	<1.0	.5	<.05	<.05	--	1.0	<1
NEM02245	N	8.2	3.0	2.5	.05	<.05	<.5	--	<1
NEM02265	N	1.5	1.2	1.4	<.05	<.05	<.5	--	<1
NEM02275	N	2.0	2.5	1.7	<.05	<.05	<.5	--	<1
NEM02295	N	1.0	1.1	1.4	<.05	<.05	<.5	--	<1
NEM02325	N	<1.0	<1.0	1.2	<.05	<.05	<.5	--	<1
NEM02355	N	<1.0	1.5	1.2	<.05	<.05	<.5	--	<1
NEM04025	N	5.8	1.5	1.7	<.05	<.05	<.5	--	<1
NEM04045	N	1.4	1.8	3.6	<.05	<.05	<.5	--	<1
NEM04065	N	3.5	1.0	1.4	<.05	<.05	<.5	--	<1
NEM04085	N	<1.0	<1.0	<1.0	<.05	<.05	<.5	--	<1
NEM04105	N	1.7	1.5	1.8	<.05	.05	<.5	--	<1
NEM04145	N	3.2	1.2	<1.0	<.05	<.05	<.5	--	<1
NEM04155	N	2.8	<1.0	<1.0	<.05	<.05	<.5	--	<1
NEM05815	N	6.5	1.5	1.0	<.05	<.05	--	<1.0	<1
NEM05835	N	11.0	20.0	44.0	.05	.09	--	N	N
NEM05855	N	41.0	12.0	19.0	.12	.21	--	N	N
NEM05875	N	<1.0	<1.0	1.0	<.05	<.05	--	<1.0	<1
NEM05885	N	<1.0	<1.0	1.4	<.05	<.05	--	<1.0	<1
NEM05905	N	14.0	9.0	9.0	.07	.11	--	N	N
NEM06105	N	<1.0	<1.0	1.0	<.05	<.05	--	<1.0	<1
NEM08085	N	1.1	<1.0	<1.0	<.05	<.05	--	<1.0	<1
NEM08105	N	2.0	1.5	1.0	<.05	<.05	--	<1.0	<1
NEM08115	N	<1.0	1.5	<1.0	<.05	<.05	--	<1.0	<1
NEM18695	N	1.2	<1.0	<1.0	<.05	<.05	--	<1.0	<1
NEM18715	N	6.7	1.5	1.0	<.05	<.05	--	<1.0	<1
NEM19405	N	<1.0	1.0	<1.0	<.05	<.05	--	<1.0	<1
STU00095	N	5.0	2.0	5.4	<.05	<.05	--	<1.0	<1
STU00115	N	3.2	2.7	2.3	<.05	<.05	--	<1.0	<1
STU00225	N	7.0	3.0	1.0	<.05	<.05	--	.0	<1
STU00235	N	<1.0	2.5	1.7	<.05	<.05	--	<1.0	<1
STU00245	N	<1.0	1.0	<1.0	<.05	<.05	--	<1.0	<1
STU00255	N	1.1	4.2	1.8	<.05	.08	--	<1.0	<1
STU00265	N	<1.0	1.5	2.4	<.05	.07	--	<1.0	<1
STU00275	N	2.0	1.8	1.9	<.05	<.05	--	<1.0	<1
STU00285	N	2.0	1.0	1.0	<.05	<.05	--	<1.0	<1
STU00295	N	1.0	<1.0	1.4	<.05	<.05	--	<1.0	<1
STU00305	N	10.0	11.5	1.0	<.05	<.05	--	<1.0	<1
STU02025	N	1.2	1.0	1.3	<.05	<.05	<.5	--	<1
STU02045	N	<1.0	<1.0	1.0	<.05	<.05	<.5	--	<1
STU02425	N	6.5	2.4	2.8	<.05	.08	<.5	--	<1
STU02445	N	4.7	2.7	2.0	<.05	.08	<.5	--	<1
STU02465	N	2.5	2.2	2.8	<.05	.10	<.5	--	<1
STU02485	N	2.5	3.5	5.0	<.05	.18	<.5	--	<1

TABLE 2.--STREAM-SEDIMENT SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	LATITUDE	LONGITUDE	(.05) S-FE%	(.02) S-MG%	(.05) S-CA%	(.002) S-TI%	(10) S-MN	(5) S-AG	(200) S-AS	(10) S-AU	(10) S-B	(20) S-BA	(1) S-BE	(10) S-BI	(20) S-CD
STU0250S	47 5 4	113 56 53	1.00	.20	.50	.15	1,500	<.5	N	N	50	1,000	7.0	N	N
STU0252S	47 7 6	113 56 57	1.50	.30	.70	.20	500	N	N	N	50	1,000	2.0	N	N
STU0254S	47 7 8	113 57 1	2.00	.50	.70	.30	500	N	N	N	100	1,000	2.0	N	N
STU0256S	47 7 9	113 56 57	1.00	.30	1.50	.15	300	N	N	N	70	1,000	2.0	N	N
STU0258S	47 6 37	113 53 49	3.00	1.00	.70	.70	1,000	<.5	N	N	300	1,000	2.0	N	N
STU0260S	47 6 16	113 52 44	3.00	.70	1.00	.30	700	N	N	N	150	700	1.5	N	N
STU0264S	47 0 17	113 53 23	3.00	.70	.30	.30	2,000	N	N	N	100	500	5.0	N	N
STU0266S	47 0 20	113 53 38	3.00	.50	.30	.30	500	N	N	N	100	500	3.0	N	N
STU0268S	47 0 32	113 53 10	3.00	.50	.20	.30	1,000	N	N	N	100	500	2.0	N	N
STU0418S	47 2 22	113 57 17	3.00	.50	.70	.30	700	N	N	N	150	1,000	3.0	N	N
STU0420S	47 2 17	113 57 17	3.00	1.00	.50	.30	700	N	N	N	200	1,000	3.0	N	N
STU0422S	47 2 12	113 57 17	3.00	.50	.70	.30	2,000	N	N	N	150	1,000	5.0	N	N
STU0424S	47 2 7	113 57 7	3.00	.70	.70	.30	700	N	N	N	200	1,000	3.0	N	N
STU0426S	47 1 28	113 57 13	5.00	.70	.70	.50	1,000	N	N	N	300	1,000	5.0	N	N
STU0428S	47 1 18	113 57 47	3.00	.70	.30	.30	700	N	N	N	200	1,000	2.0	N	N
STU0430S	47 1 3	113 58 16	1.50	.50	.70	.20	1,000	N	N	N	100	1,000	5.0	N	N
STU0615S	47 2 4	113 54 11	5.00	.70	.30	.50	1,000	N	N	N	100	1,000	2.0	N	N
STU0617S	47 1 59	113 54 12	3.00	.70	.20	.50	1,500	N	N	N	150	700	3.0	N	N
STU0619S	47 3 21	113 54 38	5.00	.70	.30	.50	1,500	N	N	N	150	1,000	3.0	N	N
STU0621S	47 3 23	113 54 42	3.00	.50	1.00	.50	700	N	N	N	100	1,500	5.0	N	N
STU0623S	47 3 28	113 54 41	3.00	.50	.30	.30	1,500	N	N	N	300	1,000	5.0	N	N
STU0625S	47 2 28	113 52 33	5.00	.50	.50	.50	1,500	N	N	N	200	1,500	3.0	N	N
STU0806S	47 4 19	113 56 14	3.00	.50	.70	.30	1,500	N	N	N	100	1,000	5.0	N	N
STU1873S	47 0 7	113 58 54	2.00	.70	.50	.30	300	N	N	N	70	700	7.0	N	N
WLA0238S	47 1 18	113 47 54	2.00	.50	.70	.20	300	N	N	N	50	1,000	3.0	N	N
WLA0240S	47 1 16	113 47 54	3.00	.50	.70	.30	300	N	N	N	100	1,000	2.0	N	N
WLA0262S	47 5 31	113 51 30	3.00	.70	.50	.30	1,500	N	N	N	300	1,500	2.0	N	N
WLA0270S	47 0 34	113 51 49	3.00	.50	.20	.30	700	N	N	N	150	500	2.0	N	N
WLA0272S	47 0 32	113 51 48	3.00	.50	.30	.30	700	N	N	N	50	700	2.0	N	N
WLA0274S	47 0 18	113 51 13	2.00	.30	.70	.20	1,000	N	N	N	70	500	3.0	N	N
WLA0276S	47 0 18	113 51 13	3.00	.50	.70	.30	1,000	N	N	N	100	700	3.0	N	N
WLA0627S	47 2 37	113 42 3	3.00	.70	.70	.30	500	N	N	N	200	1,000	2.0	N	N
WLA0629S	47 2 2	113 51 33	3.00	.70	.50	.30	1,000	N	N	N	300	1,000	5.0	N	N
WLA0633S	47 1 59	113 51 6	3.00	.70	.70	.30	1,500	N	N	N	200	1,000	3.0	N	N
WLA0635S	47 1 59	113 51 6	3.00	.70	.30	.30	700	N	N	N	200	1,000	2.0	N	N
WLA0658S	47 2 31	113 47 47	3.00	.30	.15	.30	300	N	N	N	300	700	1.5	N	N
WLA0670S	47 4 22	113 49 18	5.00	.70	.20	.50	1,000	N	N	N	300	700	1.5	N	N
WLA1479S	47 1 59	113 51 6	3.00	1.00	1.00	.50	500	N	N	N	200	2,000	3.0	N	N
WLA1852S	47 2 1	113 50 49	3.00	.50	.50	.30	500	<.5	N	N	50	500	1.5	N	N
WLA1853S	47 0 55	113 50 22	3.00	1.00	.50	.30	300	N	N	N	70	1,000	3.0	N	N
WLA1854S	47 0 22	113 50 17	3.00	.70	.30	.20	700	N	N	N	100	1,000	3.0	N	N
WLA1856S	47 1 9	113 50 47	3.00	.70	.20	.30	700	N	N	N	100	1,000	3.0	N	N
WLA1858S	47 0 1	113 50 22	2.00	.50	.30	.20	500	N	N	N	70	700	2.0	N	N
WLA1860S	47 0 4	113 50 29	2.00	.50	.30	.30	500	N	N	N	70	700	2.0	N	N

TABLE 2.--STREAM-SEDIMENT SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(5) S-CO	(100) S-CR	(5) S-CU	(20) S-LA	(5) S-MO	(20) S-NB	(5) S-NI	(10) S-PB	(100) S-SB	(5) S-SC	(10) S-SN	(500) S-SR	(10) S-V	(50) S-W	(10) S-Y	(2000) S-ZN	(10) S-ZR
STU02505	5	15	20	30	N	N	5	70	N	<5	N	<100	30	N	30	N	150
STU02525	N	50	20	50	N	N	5	30	N	5	N	100	50	N	20	N	150
STU02545	7	70	30	30	N	<20	10	30	N	7	N	100	50	N	30	N	700
STU02565	N	30	50	30	N	N	5	30	N	5	N	100	30	N	30	N	150
STU02585	7	70	70	30	N	<20	20	30	N	10	N	100	100	N	50	N	300
STU02605	7	50	20	30	N	<20	10	30	N	10	N	<100	70	N	50	N	200
STU02645	20	70	20	50	N	<20	20	50	N	15	N	N	70	N	50	N	200
STU02665	7	70	20	30	N	<20	20	30	N	15	N	<100	50	N	50	N	200
STU02685	7	50	15	50	N	<20	15	20	N	10	N	<100	50	N	30	N	200
STU04185	7	30	20	50	N	<20	15	70	N	10	N	100	70	N	50	N	200
STU04205	7	30	20	30	N	<20	15	50	N	10	N	100	70	N	50	N	200
STU04225	7	30	20	30	N	<20	15	50	N	10	N	100	70	N	30	N	500
STU04245	7	50	20	50	N	<20	15	30	N	10	N	100	100	N	50	N	300
STU04265	10	70	20	70	N	<20	30	50	N	15	N	100	100	N	70	N	300
STU04285	7	50	20	30	N	<20	15	30	N	10	N	<100	100	N	50	N	300
STU04305	<5	30	20	20	N	N	7	50	N	7	N	<100	70	N	30	N	150
STU06155	7	50	20	50	N	<20	15	30	N	10	N	100	70	N	50	N	500
STU06175	15	70	20	50	N	<20	20	20	N	10	N	<100	70	N	50	N	500
STU06195	15	50	20	50	<5	<20	20	50	N	10	N	<100	70	N	50	N	300
STU06215	5	30	30	30	N	<20	5	30	N	7	N	100	70	N	50	N	200
STU06235	7	30	15	30	N	<20	7	30	N	7	N	100	70	N	30	N	300
STU06255	7	70	30	30	N	<20	15	30	N	7	N	100	70	N	50	N	500
STU08065	7	20	50	30	N	<20	10	70	N	10	N	<100	100	N	70	N	150
STU18735	7	50	20	30	N	<20	10	30	N	7	N	<100	30	N	50	N	200
WLA02385	<5	30	20	30	N	N	10	30	N	7	N	<100	50	N	50	N	200
WLA02405	5	50	20	30	N	<20	15	30	N	7	N	100	50	N	30	N	700
WLA02625	7	70	70	30	N	<20	20	30	N	10	N	<100	50	N	30	N	300
WLA02705	7	50	15	50	N	<20	15	20	N	10	N	<100	50	N	30	N	200
WLA02725	7	50	20	30	<5	<20	15	30	N	10	N	100	50	N	30	N	300
WLA02745	7	50	20	30	N	<20	15	30	N	7	N	<100	50	N	50	N	300
WLA02765	7	70	20	30	N	<20	15	30	N	7	N	<100	50	N	50	N	300
WLA06275	7	70	20	30	N	<20	20	30	N	10	N	<100	100	N	50	N	500
WLA06295	7	30	20	50	N	<20	15	50	N	10	N	<100	70	N	50	N	500
WLA06335	15	70	20	30	N	<20	30	20	N	10	N	<100	70	N	50	N	300
WLA06355	5	70	15	30	N	<20	15	20	N	7	N	<100	70	N	30	N	500
WLA06585	5	50	15	30	N	<20	7	10	N	7	N	<100	70	N	50	N	700
WLA06705	15	70	30	50	N	<20	30	20	N	10	N	<100	100	N	50	N	700
WLA14795	<5	20	20	50	N	N	15	30	N	5	N	<100	50	N	30	N	200
WLA18525	7	50	30	30	N	<20	15	100	N	10	N	100	50	N	20	N	100
WLA18535	10	70	20	30	N	<20	20	15	N	15	N	<100	50	N	10	N	150
WLA18545	10	50	20	30	N	<20	20	30	N	15	N	<100	50	N	30	N	150
WLA18565	10	50	20	50	N	<20	20	30	N	10	N	<100	50	N	50	N	150
WLA18585	7	30	20	30	N	<20	15	20	N	7	N	N	30	N	30	N	150
WLA18605	7	30	20	50	N	<20	15	20	N	7	N	N	50	N	30	N	200

TABLE 2.--STREAM-SEDIMENT SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(100) S-TH	(1.0) AA-CU	(1.0) AA-PB	(1.0) AA-ZN	(.05) AA-AG	(.05) AA-CD	(.5) AA-CO	(10) AA-BI	(1) AA-SB
STU02505	N	2.4	8.6	6.0	.05	.17	<.5	--	<1
STU02525	N	3.7	3.0	3.5	<.05	.06	<.5	--	<1
STU02545	N	3.2	2.3	3.0	<.05	<.05	<.5	--	<1
STU02565	N	7.5	2.2	2.5	<.05	<.05	<.5	--	<1
STU02585	N	3.5	2.0	3.2	<.05	<.05	<.5	--	<1
STU02605	N	1.8	2.1	3.4	<.05	<.05	<.5	--	<1
STU02645	N	2.2	3.0	4.5	<.05	.06	<.5	--	<1
STU02665	N	1.6	1.5	2.2	<.05	<.05	<.5	--	<1
STU02685	N	<1.0	1.0	1.6	<.05	<.05	<.5	--	<1
STU04185	N	1.0	1.8	1.2	<.05	<.05	<.5	--	<1
STU04205	N	1.2	2.5	2.2	<.05	<.05	<.5	--	<1
STU04225	N	2.5	4.8	5.8	<.05	.05	<.5	--	<1
STU04245	N	1.0	1.9	1.5	<.05	<.05	<.5	--	<1
STU04265	N	1.5	2.4	2.1	<.05	<.05	<.5	--	<1
STU04285	N	1.2	2.4	1.4	<.05	<.05	<.5	--	<1
STU04305	N	2.7	3.9	3.3	<.05	.06	<.5	--	<1
STU06155	N	<1.0	1.2	3.0	<.05	<.05	--	<1.0	<1
STU06175	N	1.5	1.4	3.7	<.05	<.05	--	<1.0	<1
STU06195	N	1.4	2.0	3.0	<.05	<.05	--	<1.0	<1
STU06215	N	1.8	1.4	1.5	<.05	<.05	--	<1.0	<1
STU06235	N	<1.0	1.5	1.2	<.05	<.05	--	<1.0	<1
STU06255	N	1.4	1.7	4.0	<.05	<.05	--	<1.0	<1
STU08065	N	1.8	2.5	1.4	<.05	<.05	--	<1.0	<1
STU18735	N	1.2	2.0	1.4	<.05	<.05	--	<1.0	<1
WLA02385	N	1.3	1.2	1.6	<.05	<.05	<.5	--	<1
WLA02405	N	<1.0	1.0	<1.0	<.05	<.05	<.5	--	<1
WLA02625	N	4.4	2.6	3.7	<.05	.08	<.5	--	<1
WLA02705	N	<1.0	1.0	1.5	<.05	<.05	<.5	--	<1
WLA02725	N	2.3	2.2	1.5	<.05	<.05	<.5	--	<1
WLA02745	N	1.2	1.6	1.8	<.05	<.05	<.5	--	<1
WLA02765	N	1.1	1.5	1.5	<.05	<.05	<.5	--	<1
WLA06275	N	1.4	1.3	1.8	<.05	<.05	--	<1.0	<1
WLA06295	N	1.2	1.3	2.2	<.05	<.05	--	<1.0	<1
WLA06335	N	1.3	<1.0	1.7	<.05	<.05	--	<1.0	<1
WLA06355	N	1.2	<1.0	2.2	<.05	<.05	--	<1.0	<1
WLA06585	N	<1.0	<1.0	<1.0	<.05	<.05	--	<1.0	<1
WLA06705	N	<1.0	<1.0	2.0	<.05	<.05	--	<1.0	<1
WLA14795	N	17.0	12.0	5.0	.06	.18	--	<1.0	N
WLA18525	N	3.5	17.0	7.5	.05	.08	--	<1.0	<1
WLA18535	N	1.4	1.2	<1.0	<.05	<.05	--	<1.0	<1
WLA18545	N	1.6	2.0	1.7	<.05	.05	--	<1.0	<1
WLA18565	N	1.3	1.5	3.7	<.05	<.05	--	<1.0	<1
WLA18585	N	1.1	<1.0	1.0	<.05	<.05	--	<1.0	<1
WLA18605	N	<1.0	<1.0	1.4	<.05	<.05	--	<1.0	<1

TABLE 3.--PANNED-CONCENTRATE SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA

Sample	LATITUDE	LONGITUDE	(.05) S-FE%	(.02) S-MG%	(.05) S-CA%	(.002) S-TI%	(10) S-MN	(.5) S-AG	(200) S-AS	(10) S-AU	(10) S-B	(20) S-BA	(1) S-BE	(10) S-BI	(20) S-CD
BLP0003P	46 58 36	113 50 12	3.0	.50	.15	.30	200	N	N	N	100	300	<2	N	N
BLP0005P	46 58 42	113 50 14	5.0	1.00	.20	.70	700	N	N	N	200	700	3	N	N
BLP0205P	46 59 22	113 47 3	2.0	.50	<.10	.20	1,000	N	N	N	100	300	2	N	N
BLP0207P	46 59 23	113 47 8	5.0	1.00	<.10	.50	700	N	N	N	150	500	3	N	N
BLP0209P	46 59 19	113 47 12	5.0	1.00	<.10	.50	500	N	N	N	200	500	5	N	N
BLP0211P	46 58 47	113 47 58	2.0	.10	<.10	.50	150	N	N	N	70	150	N	N	N
BLP0213P	46 58 31	113 48 22	1.5	.50	.10	.15	300	N	N	N	70	300	3	N	N
BLP0215P	46 58 27	113 48 35	5.0	3.00	3.00	.30	700	N	N	N	70	500	<2	N	N
BLP0217P	46 58 31	113 48 44	2.0	.70	<.10	.20	300	N	N	N	70	500	2	N	N
BLP0219P	46 58 24	113 48 57	3.0	.70	.20	.20	200	N	N	N	20	500	<2	N	N
BLP0221P	46 58 24	113 49 19	3.0	.70	.15	.30	300	N	N	N	70	1,000	3	N	N
BLP0564P	46 53 19	113 50 27	5.0	1.00	.15	.70	150	N	N	N	500	700	3	N	N
BLP0566P	46 53 30	113 49 49	5.0	.70	.10	.70	500	N	N	N	150	700	3	N	N
BLP0568P	46 54 1	113 47 48	3.0	.70	.10	.70	500	N	N	N	200	500	3	N	N
BLP0570P	46 54 19	113 45 4	3.0	.70	.10	.70	300	N	N	N	200	700	3	N	N
BLP0578P	46 52 36	113 52 10	10.0	1.50	1.00	2.00	1,500	N	N	N	200	700	2	N	N
BLP1488P	46 55 52	113 45 17	3.0	.50	.10	.70	150	2	N	N	150	500	3	N	N
BLP1490P	46 55 54	113 45 15	1.0	.30	<.10	.15	70	N	N	N	150	1,000	<2	N	N
BLP1492P	46 56 26	113 45 55	3.0	1.50	.20	.70	300	<1	N	N	200	700	3	N	N
BLP1494P	46 56 29	113 46 32	1.0	.30	<.10	.30	100	N	N	N	100	500	<2	N	N
BLP1496P	46 56 29	113 46 34	1.5	.30	<.10	.20	100	1	N	N	70	700	<2	N	N
BLP1498P	46 57 28	113 45 23	5.0	2.00	.20	.70	700	N	N	N	700	1,500	7	N	N
BLP1861P	46 58 35	113 50 6	2.0	.70	.20	.30	300	N	N	N	150	700	2	N	N
BLP1865P	46 58 52	113 50 8	3.0	1.50	.15	.70	700	N	N	N	300	700	3	N	N
BLP1941P	46 58 2	113 51 53	5.0	.70	.10	.70	300	N	N	N	200	500	2	N	N
BLP1943P	46 57 59	113 51 48	3.0	1.00	.15	1.50	500	N	N	N	300	500	<2	N	N
BLP1946P	46 58 7	113 52 0	3.0	.70	.15	.70	1,000	N	N	N	200	1,000	5	N	N
BLP1949P	46 55 39	113 50 39	3.0	.70	<.10	.50	150	N	N	N	200	500	3	N	N
BLP1951P	46 55 37	113 50 38	5.0	1.50	.15	.70	500	N	N	N	500	700	5	N	N
BLP2809P	46 53 5	113 47 57	5.0	1.50	.15	.70	300	N	N	N	300	700	3	N	N
BLP2811P	46 53 5	113 48 5	5.0	1.00	.15	.70	300	N	N	N	300	1,000	3	N	N
BLP2813P	46 53 15	113 46 52	7.0	1.50	.70	1.50	700	N	N	N	300	700	5	N	N
BLP2815P	46 53 44	113 46 12	3.0	.50	<.10	.50	150	N	N	N	200	700	2	N	N
NEM0013P	46 55 20	113 54 1	7.0	1.50	1.00	1.50	1,500	N	N	N	500	1,000	3	N	N
NEM0032P	46 57 41	113 53 38	1.0	.50	<.10	.20	150	N	N	N	70	300	<2	N	N
NEM0223P	46 58 16	113 56 36	7.0	1.00	.70	2.00	1,000	N	N	N	150	700	2	N	N
NEM0225P	46 58 18	113 56 39	10.0	1.50	.70	>2.00	1,500	N	N	N	50	1,000	3	N	N
NEM0228P	46 59 57	113 57 2	5.0	1.00	.10	.50	300	N	N	N	300	70	3	N	N
NEM0231P	46 58 42	113 55 20	3.0	.70	<.10	.30	300	N	N	N	150	300	3	N	N
NEM0234P	46 59 21	113 54 27	1.5	.50	N	.20	200	N	N	N	70	300	<2	N	N
NEM0401P	46 54 56	113 56 3	5.0	.70	.15	.30	700	N	N	N	300	1,000	3	N	N
NEM0403P	46 55 9	113 56 29	5.0	.70	.10	.50	700	N	N	N	700	1,000	3	N	N
NEM0405P	46 55 52	113 56 43	5.0	1.00	.15	.50	700	N	N	N	700	1,000	5	N	N
NEM0407P	46 56 51	113 55 59	10.0	.70	.30	>2.00	1,000	N	N	N	300	500	<2	N	N
NEM0409P	46 57 23	113 55 10	3.0	.70	<.10	.30	300	N	N	N	200	500	2	N	N

TABLE 3.--PANNED-CONCENTRATE SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

	(5)	(10)	(5)	(20)	(5)	(20)	(5)	(10)	(100)	(5)	(10)	(100)	(10)	(50)	(10)	(200)	(10)
Sample	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR
BLP0003P	10	30	N	200	N	<50	10	20	N	10	N	N	70	N	150	N	1,500
BLP0005P	10	30	15	70	N	<50	20	<20	N	15	N	<200	100	N	50	N	300
BLP0205P	15	20	<10	70	<10	N	10	<20	N	<10	N	N	70	N	<20	N	200
BLP0207P	10	70	<10	70	N	<50	30	<20	N	15	N	N	70	N	50	N	300
BLP0209P	15	70	<10	70	<10	<50	20	20	N	15	N	<200	70	N	50	N	700
BLP0211P	<10	20	N	50	N	<50	<10	<20	N	<10	N	N	50	N	200	N	1,500
BLP0213P	15	30	<10	50	N	<50	30	<20	N	N	N	N	30	N	<20	N	700
BLP0215P	20	500	10	50	N	N	150	<20	N	20	N	300	150	N	50	N	150
BLP0217P	N	20	<10	50	N	N	15	20	N	10	N	N	70	N	50	N	150
BLP0219P	10	30	<10	50	N	N	20	20	N	10	N	N	50	N	20	N	100
BLP0221P	<10	30	<10	50	<10	<50	15	20	N	15	N	N	70	N	70	N	300
BLP0564P	10	100	<10	70	N	<50	30	20	N	10	N	N	100	N	70	N	300
BLP0566P	10	50	10	70	N	<50	20	100	N	10	N	N	100	N	30	N	500
BLP0568P	10	100	10	70	N	<50	15	30	N	10	N	<200	100	N	20	N	700
BLP0570P	15	70	20	70	N	<50	30	20	N	10	N	<200	100	N	50	N	700
BLP0578P	20	150	50	70	N	<50	30	20	N	15	N	<200	300	N	50	N	500
BLP1488P	10	20	<10	50	N	<50	15	30	N	10	N	N	70	N	50	N	200
BLP1490P	<10	20	<10	50	N	N	10	20	N	<10	N	N	30	N	30	N	700
BLP1492P	30	30	15	100	N	<50	15	30	N	10	N	N	70	N	50	N	700
BLP1494P	<10	30	<10	50	N	N	10	20	N	10	N	N	30	N	150	N	700
BLP1496P	<10	20	<10	50	N	<50	10	20	N	<10	N	N	50	N	<20	N	700
BLP1498P	10	150	30	50	N	<50	100	20	N	10	N	N	100	N	50	N	700
BLP1863P	10	70	<10	70	N	<50	20	20	N	N	N	<200	70	N	20	N	300
BLP1865P	10	50	10	70	N	<50	30	30	N	10	N	<200	150	N	30	N	500
BLP1941P	10	150	20	70	N	<50	20	20	N	10	N	N	100	N	70	N	1,000
BLP1943P	15	70	15	70	N	<50	15	20	N	10	N	N	100	N	50	N	1,000
BLP1946P	15	100	10	50	N	<50	20	20	N	10	N	N	100	N	30	N	500
BLP1949P	10	100	<10	50	N	<50	15	<20	N	10	N	N	70	N	30	N	700
BLP1951P	20	200	20	70	N	<50	70	20	N	20	N	N	100	N	20	N	200
BLP2809P	<10	50	<10	50	N	<50	20	20	N	10	N	N	100	N	30	N	500
BLP2811P	10	100	10	70	N	<50	20	20	N	10	N	N	150	N	50	N	700
BLP2813P	20	70	20	100	N	<50	30	20	N	10	N	N	200	N	50	N	700
BLP2815P	10	70	<10	100	N	<50	10	20	N	10	N	N	70	N	50	N	1,500
NEM0013P	15	50	30	50	N	N	20	20	N	20	N	<200	200	N	30	N	500
NEM0032P	N	30	<10	50	N	N	<10	50	N	<10	N	<200	30	N	20	N	700
NEM0223P	15	50	50	70	N	<50	20	<20	N	20	N	N	200	N	70	N	300
NEM0225P	15	30	50	70	N	<50	30	20	N	20	N	<200	300	N	70	N	500
NEM0228P	15	50	10	70	N	<50	30	<20	N	15	N	N	100	N	70	N	300
NEM0231P	10	30	<10	70	N	<50	20	<20	N	10	N	N	70	N	20	N	300
NEM0234P	10	30	<10	70	N	<50	10	<20	N	<10	N	N	50	N	20	N	500
NEM0401P	10	50	<10	70	N	<50	20	20	N	10	N	N	100	N	50	N	700
NEM0403P	30	50	15	70	N	<50	30	20	N	15	N	N	100	N	50	N	500
NEM0405P	15	30	<10	70	N	<50	30	20	N	15	N	N	100	N	70	N	300
NEM0407P	15	50	30	50	N	<50	20	20	N	15	N	N	300	N	300	N	>2,000
NEM0409P	<10	30	<10	50	N	<50	10	<20	N	10	N	N	70	N	500	N	300

TABLE 3.--PANNED-CONCENTRATE SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(100) S-TH	(02) AA-AU
BLP0003P	--	<.02
BLP0005P	--	<.02
BLP0205P	--	.08
BLP0207P	--	<.02
BLP0209P	--	<.02
BLP0211P	--	<.02
BLP0213P	--	<.02
BLP0215P	--	<.02
BLP0217P	--	<.02
BLP0219P	--	<.02
BLP0221P	--	<.02
BLP0564P	N	<.02
BLP0566P	N	<.02
BLP0568P	N	.03
BLP0570P	N	<.02
BLP0578P	N	<.02
BLP1488P	N	<.02
BLP1490P	N	<.02
BLP1492P	N	<.02
BLP1494P	N	<.02
BLP1496P	N	<.02
BLP1498P	N	<.02
BLP1863P	N	<.02
BLP1865P	N	<.02
BLP1941P	N	<.02
BLP1943P	N	.05
BLP1946P	N	<.02
BLP1949P	N	.02
BLP1951P	N	<.02
BLP2809P	N	<.02
BLP2811P	N	<.02
BLP2813P	N	<.02
BLP2815P	N	<.02
NEM0013P	--	<.02
NEM0032P	--	<.02
NEM0223P	--	<.02
NEM0225P	--	<.02
NEM0228P	--	<.02
NEM0231P	--	<.02
NEM0234P	--	<.02
NEM0401P	--	<.02
NEM0403P	--	<.02
NEM0405P	--	<.02
NEM0407P	--	<.02
NEM0409P	--	<.02

TABLE 3.--PANNED-CONCENTRATE SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	LATITUDE	LONGITUDE	(.05) S-FE%	(.02) S-MG%	(.05) S-CA%	(.002) S-TI%	(10) S-MN	(.5) S-AG	(200) S-AS	(10) S-AU	(10) S-B	(20) S-BA	(1) S-BE	(10) S-BI	(20) S-CD
NEM0411P	46 57 10	113 54 42	3.0	1.50	.15	.30	700	N	N	N	500	700	7	N	N
NEM0413P	46 57 4	113 55 14	3.0	1.00	.30	.70	500	N	N	N	300	700	3	N	N
NEM0580P	46 53 8	113 53 36	7.0	1.50	1.00	2.00	1,000	N	N	N	300	700	2	N	N
NEM0582P	46 53 31	113 55 27	5.0	1.00	.30	1.50	1,000	N	N	N	300	1,000	2	N	N
NEM0584P	46 54 12	113 53 58	30.0	1.50	3.00	>2.00	5,000	N	N	N	70	300	N	N	N
NEM0586P	46 56 9	113 58 50	2.0	.70	7.00	.50	500	N	N	N	200	500	3	N	N
NEM0589P	46 56 27	113 58 5	15.0	1.00	.70	>2.00	3,000	N	N	N	300	500	<2	N	N
NEM0609P	46 56 51	113 55 59	7.0	.70	.15	1.00	700	N	N	N	150	500	2	N	N
NEM0807P	46 57 56	113 57 21	15.0	1.50	1.00	>2.00	2,000	N	N	N	500	1,000	2	N	N
NEM0809P	46 57 55	113 57 15	7.0	1.50	.50	.70	1,000	N	N	N	300	700	5	N	N
NEM0812P	46 59 58	113 57 4	5.0	.70	.15	.50	700	N	N	N	200	1,000	3	N	N
NEM1186P	46 58 49	113 58 46	15.0	1.50	1.00	>2.00	3,000	N	N	N	300	700	<2	N	N
NEM1187P	46 58 44	113 58 47	7.0	1.50	.50	1.50	700	N	N	N	500	1,000	3	N	N
NEM1959P	46 57 29	113 53 26	3.0	1.00	.15	1.50	300	N	N	N	200	700	2	N	N
STU0008P	47 0 56	113 59 52	30.0	.70	1.00	>2.00	5,000	N	N	N	N	500	N	N	N
STU0030P	47 4 11	113 53 17	5.0	.15	.15	.70	700	N	N	N	200	1,000	3	N	N
STU0031P	47 4 14	113 53 19	7.0	1.00	.20	.70	700	N	N	N	150	700	3	N	N
STU0200P	47 2 43	113 52 48	7.0	1.00	.50	>2.00	1,000	N	N	N	150	500	<2	N	N
STU0201P	47 2 43	113 52 48	7.0	1.00	.50	2.00	1,000	N	N	N	100	300	2	N	N
STU0203P	47 2 45	113 52 47	5.0	1.00	.15	.50	300	N	N	N	150	500	2	N	N
STU0241P	47 2 43	113 59 59	10.0	3.00	2.00	.70	1,000	N	N	N	150	500	2	N	N
STU0243P	47 4 0	113 59 40	5.0	2.00	.15	.30	500	N	N	N	200	1,000	3	N	N
STU0245P	47 3 42	113 59 4	5.0	1.50	.10	.50	300	N	N	N	200	500	3	N	N
STU0247P	47 4 47	113 57 44	3.0	.00	<.10	.70	300	N	N	N	200	300	3	N	N
STU0249P	47 5 4	113 56 53	5.0	1.00	.15	.30	1,000	N	N	N	300	1,000	5	N	N
STU0251P	47 7 6	113 56 57	5.0	1.00	.15	.50	700	N	N	N	300	700	5	N	N
STU0253P	47 7 8	113 57 1	5.0	1.00	.15	.50	700	N	N	N	300	700	5	N	N
STU0255P	47 7 9	113 56 57	5.0	1.00	.15	.50	700	N	N	N	500	700	5	N	N
STU0257P	47 6 37	113 53 49	15.0	1.50	2.00	>2. 0	3,000	N	N	N	500	1,000	<2	N	N
STU0259P	47 6 16	113 52 46	7.0	1.50	1.00	1.00	700	N	N	N	500	1,000	3	N	N
STU0263P	47 0 17	113 53 23	7.0	1.00	.20	.70	1,000	N	N	N	200	1,000	5	N	N
STU0265P	47 0 20	113 53 38	5.0	1.00	.15	.70	500	N	N	N	200	1,000	5	N	N
STU0267P	47 0 32	113 53 19	5.0	.70	.15	.50	500	7	N	N	150	500	3	N	N
STU0417P	47 2 22	113 57 17	5.0	1.00	.30	.70	700	N	N	N	200	1,000	5	N	N
STU0419P	47 2 17	113 57 17	5.0	2.00	.15	.50	700	N	N	N	200	700	5	N	N
STU0421P	47 2 12	113 57 17	3.0	1.00	<.10	.30	700	N	N	N	500	300	3	N	N
STU0423P	47 2 2	113 57 7	3.0	.70	.10	.50	700	N	N	N	70	700	3	N	N
STU0425P	47 1 28	113 57 13	7.0	1.00	.20	.70	700	N	N	N	150	1,000	3	N	N
STU0427P	47 1 18	113 57 47	5.0	1.00	.15	.50	500	N	N	N	150	1,000	3	N	N
STU0429P	47 1 8	113 58 16	3.0	1.50	.10	.50	300	N	N	N	300	500	3	N	N
STU0614P	47 2 4	113 54 11	3.0	1.00	.10	.50	700	N	N	N	100	700	3	N	N
STU0616P	47 1 59	113 54 12	5.0	1.00	.10	.50	700	N	N	N	150	700	3	N	N
STU0618P	47 3 21	113 54 38	7.0	1.50	.50	1.00	1,000	N	N	N	200	700	3	N	N
STU0620P	47 3 23	113 54 42	7.0	1.50	.50	1.50	700	N	N	N	150	500	3	N	N
STU0622P	47 3 28	113 54 61	7.0	.70	<.10	.30	200	N	N	N	300	300	3	N	N

TABLE 3.--PANNED-CONCENTRATE SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(5) S-CO	(10) S-CR	(5) S-CU	(20) S-LA	(5) S-MO	(20) S-NB	(5) S-NI	(10) S-PB	(100) S-SB	(5) S-SC	(10) S-SN	(100) S-SR	(10) S-V	(50) S-W	(10) S-Y	(200) S-ZN	(10) S-ZR
NEM0411P	10	20	10	70	N	<50	20	30	N	10	N	N	70	N	50	N	300
NEM0413P	10	30	10	50	N	<50	20	<20	N	15	N	N	100	N	30	N	300
NEM0580P	20	150	30	70	N	<50	50	30	N	15	N	<200	200	N	50	N	500
NEM0582P	15	150	10	70	N	<50	20	30	N	10	N	N	150	N	50	N	500
NEM0584P	50	150	150	<50	N	<50	50	20	N	30	N	<200	700	N	50	N	700
NEM0586P	10	50	15	50	N	<50	20	30	N	10	N	N	70	N	30	N	500
NEM0589P	15	50	30	50	N	<50	20	20	N	15	N	N	500	N	50	N	700
NEM0609P	15	50	10	70	N	<50	10	<20	N	15	N	N	200	N	500	N	700
NEM0807P	15	50	50	70	N	<50	20	30	N	[illegible]	N	N	300	N	50	N	500
NEM0809P	15	50	30	70	7	<50	30	30	N	15	N	N	200	N	50	N	300
NEM0812P	15	30	10	70	5	<50	20	30	N	15	N	N	70	N	50	N	300
NEM1868P	50	70	70	70	N	<50	50	20	N	20	N	<200	500	N	100	N	500
NEM1870P	20	50	20	70	N	<50	30	20	N	15	N	N	300	N	50	N	700
NEM1939P	<10	100	10	50	N	<50	10	20	N	10	N	<200	150	N	50	N	500
STU0008P	70	50	150	<50	N	N	30	N	N	20	N	N	700	N	20	N	1,000
STU0030P	<10	100	15	50	N	N	15	20	N	15	N	N	100	N	50	N	500
STU0031P	15	50	20	70	N	<50	20	<20	N	15	N	<200	100	N	30	N	700
STU0200P	15	30	50	100	N	<50	10	20	N	15	N	<200	300	N	50	N	700
STU0201P	15	30	30	100	N	<50	10	<20	N	15	N	<200	150	N	50	N	200
STU0203P	N	30	<10	70	N	<50	15	<20	N	15	N	<200	70	N	70	N	500
STU0241P	50	50	50	50	N	N	50	20	N	30	N	N	200	N	70	N	200
STU0243P	15	50	<10	70	N	<50	30	20	N	15	N	N	100	N	70	N	300
STU0245P	15	50	10	70	N	<50	30	20	N	20	N	N	100	N	50	N	300
STU0247P	15	30	<10	70	N	<50	20	<20	N	15	N	N	50	N	50	N	500
STU0249P	15	30	<10	70	N	<50	20	30	N	15	N	N	100	N	50	N	300
STU0251P	15	50	15	70	N	<50	30	20	N	15	N	N	100	N	70	N	500
STU0253P	10	50	10	70	N	<50	30	30	N	15	N	N	100	N	100	N	500
STU0255P	15	50	10	70	<10	<50	30	<20	N	15	N	<200	100	N	50	N	500
STU0257P	50	30	150	100	N	50	50	20	N	20	N	<200	500	N	70	N	500
STU0259P	15	50	30	70	N	<50	30	20	N	20	N	<200	200	N	50	N	700
STU0263P	15	150	30	100	N	<50	30	20	N	20	N	N	150	N	70	N	500
STU0265P	15	100	<10	100	N	<50	30	20	N	20	N	N	150	N	70	N	500
STU0267P	10	50	<10	70	<10	<50	20	20	N	10	N	N	100	N	50	N	200
STU0417P	10	30	<10	70	N	<50	20	30	N	15	N	N	100	N	70	N	700
STU0419P	10	50	10	70	5	<50	20	30	N	15	N	N	100	N	50	N	200
STU0421P	<10	30	<10	50	N	<50	20	20	N	10	N	N	70	N	20	N	300
STU0423P	15	30	30	50	N	<50	30	20	N	10	N	N	70	N	20	N	200
STU0425P	15	100	20	70	N	<50	30	30	N	20	N	<200	100	N	70	N	300
STU0427P	20	50	10	70	N	<50	20	30	N	15	N	<200	70	N	70	N	300
STU0429P	15	100	<10	70	N	<50	30	20	N	10	N	N	70	N	50	N	300
STU0614P	10	30	<10	70	N	<50	10	20	N	15	N	N	70	N	50	N	200
STU0616P	100	70	20	70	N	<50	20	20	N	15	N	N	100	N	70	N	300
STU0618P	15	50	30	100	N	<50	20	30	N	15	N	N	100	N	50	N	500
STU0620P	10	20	10	100	N	<50	10	20	N	15	N	N	100	N	50	N	500
STU0622P	N	30	<10	70	N	<50	<10	<20	N	15	N	N	70	N	50	N	500

TABLE 3.--PANNED-CONCENTRATE SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(900) S-TH	(03) AA-AU
NEM0411P	--	<.02
NEM0413P	--	<.02
NEM0580P	N	<.02
NEM0582P	N	.72
NEM0584P	N	.02
NEM0586P	N	<.02
NEM0589P	N	<.02
NEM0609P	--	<.02
NEM0807P	--	<.02
NEM0809P	--	<.02
NEM0812P	--	<.02
NEM1868P	N	<.02
NEM1870P	N	<.02
NEM1939P	N	<.02
STU0008P	--	<.02
STU0030P	N	<.02
STU0031P	--	<.02
STU0200P	--	.45
STU0201P	--	<.02
STU0203P	--	<.02
STU0241P	--	<.02
STU0243P	--	<.02
STU0245P	--	<.02
STU0247P	--	<.02
STU0249P	--	<.02
STU0251P	--	<.02
STU0253P	--	<.02
STU0255P	--	<.02
STU0257P	--	<.02
STU0259P	--	<.02
STU0261P	--	<.02
STU0265P	--	<.02
STU0267P	--	<.02
STU0417P	--	<.02
STU0419P	--	<.02
STU0421P	--	<.02
STU0423P	--	<.02
STU0425P	--	<.02
STU0427P	--	<.02
STU0429P	--	<.02
STU0614P	--	<.02
STU0616P	--	<.02
STU0618P	--	<.02
STU0620P	--	<.02
STU0622P	--	<.02

TABLE 3.--PANNED-CONCENTRATE SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	LATITUDE	LONGITUDE	(.05) S-FE%	(.02) S-MG%	(.05) S-CA%	(.002) S-TI%	(10) S-MN	(.5) S-AG	(200) S-AS	(10) S-AU	(10) S-B	(20) S-BA	(1) S-BE	(10) S-BI	(20) S-CD
STU0624P	47 2 28	113 52 33	5.0	1.00	.10	.30	500	N	N	N	150	500	3	N	N
STU0805P	47 4 19	113 56 14	10.0	2.00	1.00	>2.00	1,500	N	N	N	200	1,000	2	N	N
STU1872P	47 0 7	113 58 54	5.0	1.50	.30	1.00	700	N	N	N	300	700	2	N	N
WLA0237P	47 1 18	113 47 54	3.0	1.50	.10	.30	150	N	N	N	100	500	<2	N	N
WLA0239P	47 1 16	113 47 54	3.0	1.00	.15	.70	300	N	N	N	150	500	3	N	N
WLA0261P	47 5 31	113 51 30	7.0	1.50	.15	.50	700	N	N	N	500	1,000	3	N	N
WLA 269P	47 0 34	113 51 49	5.0	.70	.15	.50	700	N	N	N	100	700	3	N	N
WLA0271P	47 0 32	113 51 48	5.0	.70	.20	.50	1,000	N	N	N	200	1,000	3	N	N
WLA0273P	47 0 18	113 51 13	5.0	1.00	.20	.50	700	N	N	N	100	700	3	N	N
WLA0275P	47 0 18	113 51 13	5.0	1.00	.30	.50	700	N	N	N	100	700	3	N	N
WLA0626P	47 2 37	113 52 3	3.0	1.00	.10	.30	500	N	N	N	300	500	3	N	N
WLA0628P	47 2 2	113 51 33	5.0	1.00	.15	.50	700	N	N	N	150	700	3	N	N
WLA0632P	47 1 59	113 51 6	3.0	.70	<.10	.50	300	N	N	N	100	300	3	N	N
WLA0634P	47 1 59	113 51 6	3.0	1.00	<.10	.30	300	N	N	N	200	300	3	N	N
WLA0657P	47 2 31	113 47 47	3.0	.70	<.10	.30	300	N	N	N	100	500	2	N	N
WLA0669P	47 4 22	113 49 18	5.0	1.00	.10	.50	500	N	N	N	300	500	3	N	N
WLA1478P	47 1 59	113 51 6	5.0	1.50	.30	1.00	300	N	N	N	300	700	3	N	N
WLA1855P	47 1 9	113 50 47	3.0	1.00	.10	.70	700	N	N	N	300	700	3	N	N
WLA1857P	47 0 1	113 50 22	3.0	1.50	.20	.70	500	N	N	N	300	700	3	N	N
WLA1859P	47 0 4	113 50 29	5.0	1.00	.30	.70	300	N	N	N	150	700	2	N	N

TABLE 3.--PANNED-CONCENTRATE SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(5) S-CO	(10) S-CR	(5) S-CU	(20) S-LA	(5) S-MO	(20) S-NB	(5) S-NI	(10) S-PB	(100) S-SB	(5) S-SC	(10) S-SN	(100) S-SR	(10) S-V	(50) S-W	(10) S-Y	(200) S-ZN	(10) S-ZR
STU0624P	10	30	15	70	N	<50	15	20	N	15	N	N	70	N	70	N	300
STU0805P	15	50	50	100	N	<50	30	50	N	20	N	<200	500	N	70	N	500
STU1872P	15	100	15	70	N	<50	20	20	N	15	N	<200	150	N	70	N	500
WLA0237P	10	30	<10	70	N	N	20	<20	N	15	N	N	70	N	20	N	150
WLA0239P	<10	30	<10	70	N	<50	20	<20	N	10	N	N	70	N	30	N	300
WLA0261P	15	100	30	70	N	<50	30	20	N	20	N	<200	150	N	50	N	700
WLA0269P	10	50	<10	70	N	<50	20	20	N	10	N	N	100	N	50	N	700
WLA0271P	15	50	<10	70	N	<50	20	30	N	10	N	N	100	N	50	N	500
WLA0273P	15	50	<10	70	N	N	50	20	N	10	N	N	100	N	30	N	300
WLA0275P	10	50	<10	70	N	<50	30	20	N	10	N	N	100	N	50	N	700
WLA0626P	10	50	10	70	N	<50	20	20	N	15	N	N	70	N	30	N	300
WLA0628P	10	30	10	70	N	N	20	30	N	15	N	<200	100	N	50	N	300
WLA0632P	15	30	<10	70	N	<50	20	<20	N	15	N	N	70	N	200	N	300
WLA0634P	15	30	<10	70	10	<50	20	<20	N	10	N	N	70	N	50	N	300
WLA0657P	10	30	<10	70	N	<50	15	20	N	10	N	N	70	N	50	N	700
WLA0669P	15	50	15	70	N	<50	30	20	N	15	N	N	70	N	50	N	500
WLA1478P	15	70	10	50	N	<50	20	30	N	10	N	N	100	N	50	N	500
WLA1855P	10	30	10	70	N	<50	20	20	N	10	N	N	150	N	30	N	1,500
WLA1857P	10	100	15	70	N	<50	30	20	N	10	N	N	150	N	50	N	700
WLA1859P	10	200	15	70	N	<50	30	20	N	10	N	<200	150	N	70	N	1,500

TABLE 3.--PANNED-CONCENTRATE SAMPLE LOCALITY AND ANALYSES FROM THE RATTLESNAKE WILDERNESS STUDY AREA, MISSOULA COUNTY, MONTANA (CONTINUED)

Sample	(100) S-TH	(02) AA-AU
STU0624P	--	<.02
STU0805P	--	<.02
STU1872P	N	<.02
WLA0237P	--	<.02
WLA0239P	--	<.02
WLA0261P	--	<.02
WLA0269P	--	<.02
WLA0271P	--	<.02
WLA0273P	--	<.02
WLA0275P	--	<.02
WLA0626P	--	<.02
WLA0628P	--	<.02
WLA0632P	--	<.02
WLA0634P	--	.04
WLA0657P	--	<.02
WLA0669P	--	<.02
WLA1478P	N	<.02
WLA1855P	N	<.02
WLA1857P	N	<.02
WLA1859P	N	<.02

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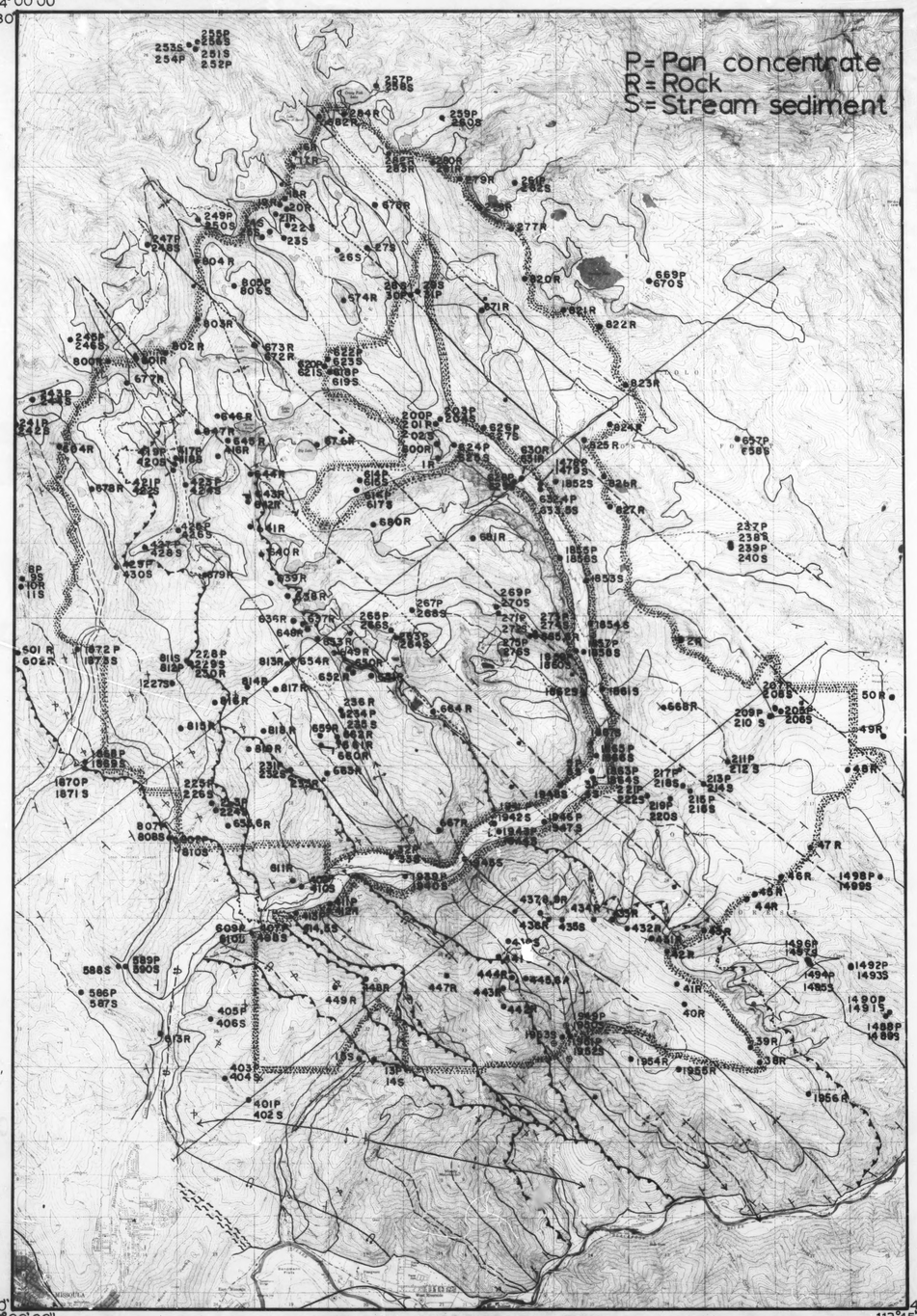
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

OPEN-FILE REPORT
81-1219

114°00'00"

47°07'30"



46°52'30"

114°00'00"

113°45'00"

Base from U.S. Geological Survey, 1964 and 1965.

SCALE 1:50000

1 5 0 1 2 3 MILES

1 5 0 1 2 3 KILOMETERS

Geology mapped by J. E. Harrison, 1975, Don Winston, 1974, and C. A. Wallace, 1975 and 1979.
Compilation by C. A. Wallace and D. J. Lidke, 1980

Plate 1. Geochemical sample locality map for the Rattlesnake Wilderness study area, Missoula County, Montana

by

W. Campbell, S. McDanal, and R. Hopkins